

DE GRUYTER

*Gottfried Seebaß, Michael Schmitz,
Peter M. Gollwitzer (Eds.)*

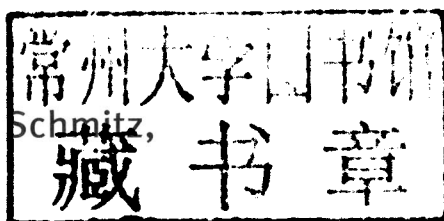
**ACTING INTENTIONALLY
AND ITS LIMITS:
INDIVIDUALS, GROUPS,
INSTITUTIONS**

Acting Intentionally and Its Limits: Individuals, Groups, Institutions

Interdisciplinary Approaches

Edited by

Gottfried Seebaß, Michael Schmitz,
and Peter M. Gollwitzer



DE GRUYTER

ISBN 978-3-11-028443-0
e-ISBN 978-3-11-028446-1

Library of Congress Cataloging-in-Publication Data

A CIP catalog record for this book has been applied for at the Library of Congress.

Bibliographic information published by the Deutsche Nationalbibliothek

The Deutsche Nationalbibliothek lists this publication in the Deutsche Nationalbibliografie;
detailed bibliographic data are available in the Internet at <http://dnb.dnb.de>.

© 2013 Walter de Gruyter GmbH, Berlin/Boston
Typesetting: PTP-Berlin Protago-TEX-Production GmbH, Berlin
Printing: Hubert & Co. GmbH & Co. KG, Göttingen
♻️ Printed on acid-free paper
Printed in Germany

www.degruyter.com



Gottfried Seebaß, Michael Schmitz, Peter M. Gollwitzer (Eds.)

Acting Intentionally and Its Limits: Individuals, Groups, Institutions

Preface

The papers contained in this volume have grown out of contributions to the international conference “Acting Intentionally: Individuals, Groups, Institutions. Interdisciplinary Approaches” which took place in Konstanz, Germany, from June 22nd to June 25th, 2011, organized by the interdisciplinary research group “Limits of Intentionality” at the University of Konstanz.

Cooperation on questions of intentionality in Konstanz began in 2000 when several scholars, mainly psychologists and philosophers, realized that, independently and unnoticed by each other, they had done a lot of work on the phenomena of wanting, willing and intending that should be brought together and carried on more effectively in an institutionalized interdisciplinary context. In 2001 we started with a Center “Intentionality” mostly funded by the university. Five years later, a grant from the *Deutsche Forschungsgemeinschaft* made it possible for us to continue our cooperation in the context of the Research Group “Limits of Intentionality”. This group, which existed from 2006 to 2012, integrated relevant research in philosophy, psychology, sociology and jurisprudence.

Cordial thanks are due to the *Deutsche Forschungsgemeinschaft* as well as to the University of Konstanz for their continued generous support, to Tanja Pfeiffer for expert editing, and to the representatives of *De Gruyter* for their kind and generous assistance in the planning and publication of this volume.

Gottfried Seebaß, Michael Schmitz, and Peter M. Gollwitzer

Contents

Preface — v

Gottfried Seebaß, Michael Schmitz, and Peter M. Gollwitzer

Introduction — 1

John R. Searle

Intentions, Actions and Explanations — 47

Michael Schmitz

Limits of Intention and the Representational Mind — 57

Felix Thiede

German Private Law's Approach to Intentionality — 85

Hans Christian Röhl

Legislator's Intent – Limits of a Concept — 121

Frank Wieber, J. Lukas Thürmer, and Peter M. Gollwitzer

Intentional Action Control in Individuals and Groups — 133

Gabriele Oettingen

Foreseeing Obstacles: Mental Contrasting and Intention Formation — 163

Tobias Heikamp, Gisela Trommsdorff, and Anika Fäsche

Development of Self-Regulation in Context — 193

Maayan Davidov

The Socialization of Self-Regulation from a Domains Perspective — 223

Clancy Blair and Rachel McKinnon

**Experiential Canalization Model of Executive Function Development:
Implications for the Origins and Limits of Intentionality in Children — 245**

Nachshon Meiran, Michael W. Cole, and Todd S. Braver

**When Planning Results in Loss of Control: Intention-Based Reflexivity and
Proactive Control — 263**

Kai Robin Grzyb

Mechanisms of Switching Intentions: Inhibition Promotes Flexibility in Sequential Action Selection — 291

About the Authors — 313

Gottfried Seebaß, Michael Schmitz, and Peter M. Gollwitzer

Introduction

Individual intentional action and intentions have been a focus of investigation in philosophy and psychology since their beginning. Recently, collective action and collective intentions are also increasingly coming to the fore. Throughout this history, the limits of intentions have been a central topic in two distinct, but still related respects. First, the boundaries of the concept of intention have shifted at various points in that history. Second, there has always been an interest in the limits of intentions in the sense of the limits of their efficacy in controlling behavior, and of course these limits will vary depending on how intentions are delineated. This interest in turn is at heart an interest in the limits of rationality in controlling behavior, since intentions are or at least can be the products of processes of practical rationality, of practical reasoning. In what follows, we trace part of the ancient as well as the more recent history of that debate, not for its own sake, but as a means of introducing various aspects of intentions and their control over behavior and of locating the contributions of this volume in the geography of this territory.

1 Historical Background

It is a leading idea in Western thought, inherited both from the Greek and Judaeo-Christian tradition, that human beings are distinguished by their ability to rationally control and dominate large parts of the natural world as well as the cultural activities of individuals and societies. This in turn presupposes abilities for future-oriented rational deliberation, intention formation and goal directed intentional action. However, the capacity of humans to do this is limited and restricted by various inner and outer factors. This has been noted and reflected critically for long, beginning already in ancient literature (most prominent Sophocles: *Antigone*, 332–375).¹ Plato and Aristotle began to analyze, differentiate and clarify conceptually not only various forms of rational intentional action but also different kinds of “*acritic*” action, that is actions due to the rationally irritating inability to prefer and choose means or ends considered best (or better in compari-

¹ Cf. Seebaß 2006, ch. 1, for the *Antigone* passage in particular pp. 7f. and 276ff. For other relevant texts including even the early Homeric epics see Lesky 1961, Snell 1986, and Schmitt 1990.

son) and to pursue them consequently.² Undeniable instances of “acrasia” were explained predominantly by general or temporary intellectual defects, epistemic as well as ratiocinative, but in part also (at least by Aristotle) with reference to long-standing defective mental or physiological habituation and automatization. Moreover, some of the later Stoics and early Christian thinkers drew attention to volitional and motivational defects resulting in a severe reduction or total loss of action control even in cases where the antecedent volitions and intentions are formed rationally and without ignorance.³

Both kinds of defects played an essential part in stimulating further inquiries into intentional action and its limitations. On the one hand, philosophers attempted to clarify the relations between mere intentions and the ensuing, distal as well as proximal, intentional acts. In this vein it is asked, e.g., whether there are (or should be in the defective case) relevant causal links.⁴ Or it is asked whether the very concepts of willing or intending imply that the persons in question actually try to realize their volitional objectives (as has been argued by Hobbes and many others⁵) or, at the very least, that they are convinced personally that these objectives can be or will be directly or indirectly realized by their own actions.⁶

On the other hand, there have been continuous efforts to specify the conditions of forming the will and deciding to forbear or enter into a particular course of action. Although the strong and pervasive influence of irrational factors (viz. habits, moods, passions, and feelings) is not ignored, the main focus within philosophy is on the rational factors. Following Aristotle’s pioneer work various forms of deliberation and practical inference are studied, mainly forms suited to yield rational choices of means to given ends, which may include distant goals.

2 Cf. Plato: *Protagoras*, 351b–357e; *Leges*, 860c–872c; Aristotle: *Ethica Nicomachaea*, III, 1–7; V, 10; VI–VII; *Ethica Eudemica*, II, 7–10; *De anima*, III, 9–10; *Physica*, VIII, 2–5; *De motu animalium*, 4–8. For detailed analyses and discussions of Aristotle’s position see, e.g., Furley 1967, Kenny 1979, and Sorabji 1980. For a succinct survey of the philosophical discussions of “acrasia” see Seebaß 2005.

3 Cf. Epictetus: *Diatribai*, IV, 1; Paulus: *Romans* 7, 7–25; Augustine: *Confessiones*, VIII: 8, 20–9, 21. For a general historical overview and interpretation see Arendt 1978, vol. II, ch. II, Dihle 1982, and Kahn 1988.

4 An affirmative answer is quite common for nondefective cases. For a prominent defence of this answer even for various defective cases, see Kant 1902–1923, vol. V, 9, 15, 177f.; vol. VII, 251.

5 Cf. Hobbes: *Opera*, vol. II, 95f.; *English works*, vol. III, 48f.; IV, 68, 272f.; Locke 1975, bk. II, ch. 21, §§ 5, 28ff.; Hume 1975, 64f.; Hume 1978, 399, 632f., 655f.; Schopenhauer 1977, vol. VI, 56, 78; Mill 1963–1991, vol. X, 238f.; Kenny 1963, 236; Kenny 1975, 41f.; Frankfurt 1988, 14ff.

6 Many authors have argued for some such position. See, e.g., Locke 1975, bk. II, ch. 21, § 30; Reid 1969, Essay II, 1; Sigwart 1889, 120f., 149f.; Brentano 1971, vol. II, 103, 115; Russell 1921, 285, and for a classical text in psychology Ach 1910, 240ff., cf. Ach 1935, 201.

Later, beginning with Abelard, similar forms of reasoning are investigated and applied to consequences, effects and side-effects of intended ends or goals, too, leading to new, influential conceptions of “conditional” or “oblique” willing and intending suited especially well to the understanding of actions which appear to be unintentional, wholly or partly, at first glance.⁷ Philosophical inquiries into intentional human action and its enabling or limiting conditions have been undertaken most often with the pronounced further intent to clarify the conditions of moral and legal responsibility. Therefore it is not astonishing that many philosophical conceptions and distinctions also reappear, directly or in modified form, in the law and in legal theory.⁸

In accordance with everyday usage, states or processes of willing and intending are traditionally taken by philosophers to be mental events to be identified subjectively by (actual or potential) conscious experience. Moreover, they are mainly conceived as a particular kind of (verbalized or verbalizable) propositional attitude, that is “willing/intending that p”. However, there is still a substantial number of philosophers, who claim that all kinds of volition can be reduced to simpler, nonpropositional phenomena such as elementary perceptions, representations or feelings. On either view, individual actions are taken to be intentional to the extent that they are controlled by their mental antecedents, whether these are taken to be propositional attitudes or not. Moreover, on either view it is taken for granted that the mental antecedents are conscious. This general view of action was not called into question for a long time. It was not even challenged by the pioneers of experimental psychology. Wundt and James were not only expert philosophers but also experienced physiologists and quite willing to look at intentional human action from this angle. But neither of them was tempted to stop thinking of intentions as conscious states when attempting to give an experimentally informed, strictly empirical account of volition and voluntary, intentional action.⁹ And this was all the more true for Brentano, another philosopher taking turns as an empirical psychologist.¹⁰

For some time psychologists then tried to refine what – with a misleading visual metaphor – was called “introspection” into a technique of experimental

7 Cf. Abelard: *Ethica*, capp. 1–3; Saarinen 1994, chs. 2–3; Matthews 1998; Bentham 1948, chs. VIII, 6, and IX, 10; Sigwart 1889, 168–199; Anscombe 1957, 41f., 89; Goldman 1970, 59f.; Harman 1986, 89f., 106ff.; Bratman 1987, ch. 10.

8 A prominent and influential modern example is Pufendorf 1934, lib. I.

9 Wundt 1888; Wundt 1911, ch. 17; James 1950, ch. XXVI.

10 Brentano 1971, vol. II, ch. 8.

research.¹¹ When this introspectionist program, however, ran into trouble and produced diminishing returns, behaviorists proposed the radical expedient of trying to ignore consciousness altogether. Psychologists such as Watson, Tolman, Hull or Skinner started to analyze psychological states and processes, including even higher mental phenomena such as desiring, wanting, willing, and intending or having goals and purposes as behavioral causal dispositions.¹² Influenced by this zeitgeist various philosophers, most prominently Ryle and Wittgenstein, came up with different versions of a view often referred to as “logical behaviorism.”¹³ While these philosophers, notably Wittgenstein, often distanced themselves from psychological behaviorism and tried to defend themselves against the charge of ignoring consciousness or even denying its reality,¹⁴ they did in different ways emphasize behavior over the traditional focus on what Ryle disparagingly called “the ghost in the machine”.¹⁵

The analytical tools were sharpened substantially with the proposal to analyze intentional goal-directed behavior by applying concepts designed for nonintentional teleological processes such as self-regulating biological and technical processes.¹⁶ Among the relevant criteria for “goal directedness” in this sense are features like the “persistence” or “perseverance” of an organism (or machine, e.g., a self-guided missile) in reaching a characteristic end state, the existence of a “directive correlation” (e.g., mechanical feedback) between relevant starting or intermediate positions and reactive activities necessary to reach the end state in question, and “plasticity” (i.e., behavioral flexibility) in reacting to a variety of intervening obstacles and spontaneous behavioral aberrations. As these concepts were gradually refined, some authors even developed complex, sophisticated dispositional analyses of propositional attitudes like believing, wanting or intending.¹⁷

11 For a historical overview, see Boring 1953, Danziger 1980, and Lyons 1986, and for the general significance of introspection to psychology Hatfield 2005.

12 Cf. Watson 1962; Tolman 1932; Tolman 1966, chs. 1–6; Hull 1943; Skinner 1953, ch. VII; Skinner 1993, ch. 4.

13 See, e.g., Chihara and Fodor 1965, and Fodor 1968.

14 Ryle 1949, ch. X, 2; Wittgenstein 1953, §§ 307f.

15 Ryle 1949, ch. I, 2 and passim. For his dispositionalism in general see Ryle 1949, chs. II, 7 and V, for his analysis of volition and willing 1949, ch. III.

16 See, e.g., Braithwaite 1953, ch. X; Nagel 1961, ch. 12 I; Nagel 1979, ch. 12; Taylor 1964, pt. I; Wright 1971, chs. II, 6–III; Sorabji 1980, chs. 10–11; McLaughlin 2001, pt. II; Weber 2005, ch. 2.4. The view is prefigured in Russell 1921, lect. III. For a general survey and critical discussion, see Woodfield 1976 and Seebaß 1993, 176ff.

17 An impressive example is Bennett 1976, chs. 2–4.

External behavioral criteria are indispensable anyway, if one wants to ascribe volitions and intentions (of some kind) to infants from the outside, or even to certain higher animals. So it might seem that a complete reductive behaviorist analysis of intentional concepts is indispensable, too. But this would be overhasty. It can be adequate as a technical label for a certain observed form of animal, or even machine, behavior (cf. below p. 29). But it would be wholly inadequate and highly misleading if this is meant to cover the entire range and the most central forms of human intentionality. It is one thing to rely on behavioral evidence in order to *ascribe* mental states or processes. It is quite another to maintain that mental events *are* nothing but behavioral dispositions. And despite the fact that the idea of a reductive dispositional analysis survives up to the present (viz. in the philosophy of mind under the name of “functionalism”) it has become more than doubtful that reductions of this kind are possible, at least if applied to higher mental phenomena such as propositional beliefs, volitions and intentions.¹⁸ Accordingly, it is more than doubtful, too, that the intentional actions of human beings can be analyzed out completely into goal oriented (flexible, directionally correlated) activities causally dependent on behavioral dispositions.

2 Recent Developments in Psychology

For the behaviorists, referring to responses of an organism (animal or human) as intentional or goal-directed was simply an issue of labeling. Behaviors that showed the features of persistence, appropriateness, and searching were referred to as intentional or goal-directed. The concept of goal was used to describe the incentive the organism was trying to attain. So for the hungry organism, for instance, food qualified as a goal. A behaviorist researcher’s statement that food is a goal to the hungry organism meant according to B. F. Skinner nothing more than (1) that it is known that food is a powerful incentive to this organism, and (2) that the researcher has chosen to describe the behavior of the organism in relation to food rather than in relation to any object or event.¹⁹

With the emergence of cognitive social learning theory as promoted by Walter Mischel and Albert Bandura in the 1970s,²⁰ however, psychology started to analyze

¹⁸ For a detailed critique of dispositionalist analyses see Seebaß 1993, ch. IV, 3. For critiques of functionalism and the general tendency to neglect consciousness, see e.g. Searle 1992, Strawson 1994, and Chalmers 1996.

¹⁹ Cf. Skinner 1953.

²⁰ Cf. Bandura 1977.

intentions, interchangeably referred to as goals, as subjective mental states pertaining to personal resolutions (“I want to reach outcome x!” or “I want to show behavior x!”). By doing so the classic question raised by German will psychology as promoted by Kurt Lewin²¹ returned to the foreground: What determines that some of the intentions/goals people come up with are fulfilled/attained, whereas others are not? And what can people do to enhance their chances of realizing them?

It is this problem of the intention-behavior gap that the recent psychology of motivation is obsessed with. Two ways of closing the intention-behavior gap are suggested: (a) one points to the necessity that people need to form strong intentions or goal commitments, and (b) the other points to the fact that people can enhance the effectiveness of striving for their goals. That goal attainment requires solving the two subsequent tasks of setting strong goals and the effective implementation of chosen goals has been pointed out by Heinz Heckhausen and Peter Gollwitzer in their Rubicon model of action phases (the resolution implied by forming an intention is referred to as crossing the Rubicon).²² There it is argued that an important prerequisite for committing to goals effectively (i.e., setting strong binding goals) is a high felt desirability of having attained the goal that is accompanied by a high perceived feasibility of being in a position to ultimately reach the goal. In other words, low perceived desirability and feasibility of reaching the goal will lead to weak goal commitments.

In line with this reasoning, research on goal setting has searched for factors that determine whether a goal is perceived as desirable and feasible.²³ Such research discovered, for instance, that people whose achievement motives are based on a high hope for success do opt for setting themselves achievement goals of a medium difficulty, whereas people whose achievement motives are based on a strong fear of failure do set themselves achievement goals of either very low or very high difficulty (this way avoiding failure or having an excuse for it, respectively). Moreover, it was observed that people who construe their self in terms of ideals that are to be reached versus oughts that need to be fulfilled do select promotion goals (i.e., goals that target the presence or absence of positive outcomes) and prevention goals (i.e., goals that target the presence or absence of negative outcomes), respectively. Finally, it was found that people who construe their intelligence as something that is fixed prefer to set themselves performance goals (i.e., goals geared towards discovering the exact level of intelligence that

²¹ Cf. Lewin 1926.

²² Cf. Heckhausen and Gollwitzer 1987.

²³ Summary by Bargh, Gollwitzer, and Oettingen 2010.

one possesses), whereas people who construe intelligence as something that is malleable prefer to set themselves learning goals (i.e., goals geared at finding out how to best solve the problems at hand).

With respect to effective goal implementation the Rubicon model of action phases proposes that people need to concern themselves with the questions of when, where, and how to strive for the goal at hand. In line with this reasoning, research on goal striving attempted to discover the determinants of such considerations.²⁴ For instance, Charles Carver and Michael Scheier in their control theory have argued that movement toward a goal reflects the functioning of a discrepancy-reducing feedback loop.²⁵ Such a loop involves the sensing of some present condition, which is compared to the intended condition (i.e., the goal standard). If the two are identical, nothing more happens, but if there is a discrepancy between the two, the discrepancy is countered by subsequent action to reduce it. The overall effect of such a feedback loop and of thus being controlled by feedback is to trigger goal striving when needed. In support of this theorizing, extensive research by Locke and Latham has shown that acting on specific goals (such goals are known to facilitate discrepancy detection) leads to more effective goal striving than acting on do-your-best goals (e.g., how many pages one wants to write over the weekend) rather than vague (e.g., to write as much as possible).²⁶ Carver and Scheier's control theory also suggests that feedback on the speed of goal striving also affects a person's goal striving efforts. This feedback is leading to positive affect (when moving fast enough) or negative affect (when moving too slow). Research shows that positive affect caused by moving too fast will in turn lead to coasting on the goal, whereas negative affect caused by moving too slow leads to enhanced goal striving.

More recently, research on goals has addressed the question of what way of thinking might facilitate committing to goals that are both attractive and feasible. One mental strategy for bolstering such wise goal setting is mental contrasting of future and reality as suggested by Gabriele Oettingen.²⁷ This strategy asks the agent to imagine achieving a desired future outcome (e.g., getting an A in an upcoming exam), and then to imagine the most critical obstacle of reality standing in the way of achieving this future (e.g., invitation to a party). The juxtaposing of the desired future and its obstacles highlights both the perceived valence and the perceived feasibility of goal attainment. Consequently, mental contrasting

²⁴ Summary by Bargh, Gollwitzer, and Oettingen 2010.

²⁵ Carver and Scheier 1998.

²⁶ Locke and Latham 1990.

²⁷ Oettingen 2012.

strengthens commitment to and striving for goals that are perceived as attractive but also feasible, and it helps people to stay away from or disengage from (attractive) goals that cannot be reached.

Similarly, there is also recent research on what kind of thinking best prepares people for goal striving (i.e., moving towards the set goal). One such strategy suggested by Gollwitzer is furnishing the set goal with plans specifying the where, when and how of goal striving (i.e., form implementation intentions).²⁸ It is particularly effective to lay down these plans in the format of “If I encounter situation x, then I will show goal-directed response y!” For example, if a student has the goal to attain an A in the upcoming test, she might form the implementation intention, “If my friend invites me to her party, then I will immediately say no!” These plans derive their beneficial effects on goal striving from the strong associative links that are formed between the critical situation specified in the if-part of the plan and the respective goal-directed response specified in the then-part. People show a heightened perceptual readiness for the specified critical situational cues as well as a heightened behavioral readiness once the critical cue is encountered. Actually, the specified goal-directed response is performed immediately, efficiently, and without the need of a further conscious intent. Even if the critical specified situational cue is presented subliminally (i.e., the presentation time is so low that no conscious awareness of the presence of the cue is possible) the beneficial effects of implementation intentions on immediate and efficient action initiation can still be observed.²⁹

Psychologists have referred to mental contrasting and forming implementation intentions as self-regulation strategies of goal pursuit. This label highlights that mental contrasting and forming implementation intentions are distinct cognitive procedures (strategies of reasoning) that can be engaged in by people on the basis of an instruction by others (teachers, experimenters) or a self-instruction. In any case, postulating and showing that such strategies of thinking can positively affect goal setting and goal striving respectively, is quite different to traditional research on goals that solely focused on the determinants of goal setting and goal striving.

Psychologists these days assume that goal striving cannot only be automated by forming implementation intentions (so-called strategic automaticity as action control is intentionally delegated to situational cues). According to John Bargh and colleagues, cues in the agent’s environment can also instigate the non-con-

²⁸ Cf. Gollwitzer 1999.

²⁹ Cf. Bayer et al. 2009.

scious activation and pursuit of goals.³⁰ Take, for example, a person at a party where she does not know anyone and will never see the people there again. Even if she will walk into the party with no explicit goal to affiliate, the situational cues at the party (music, fancy clothes, etc.) will activate outside of conscious awareness the mental representations of the affiliation goals she has striven for in the past in such contexts. The partygoer will thus display goal-directed behaviors such as preferring to affiliate over other tasks, continuing to socialize when interrupted, and ceasing affiliation efforts once the goal is completed. While she will not be able to report on having had this affiliation goal, one can see from her behavioral efforts that she was striving for this goal. Experimental research on automatic goal pursuit has made a special effort to demonstrate that the observed behaviors indeed pertain to the implementation of goals rather than simply acting on habits, moods, or behavioral patterns activated by the situational context at hand (as has been suggested by some philosophers³¹), and most psychologists agree that this effort has been successful. This was done by assessing the classic features of goal striving as defined by the behaviorists. If one takes the feature of appropriateness (i.e., flexibly adjusting one's behaviors to the demands of the situation), for instance, this feature is more pronounced in goal-directed behavior than in habitual behavior; or if one takes the feature of persistence, this feature is hardly observed with conceptually (contextually) triggered behavior but quite pronounced in goal-directed behavior.

The experimental research on automatic goal pursuit has made intensive use of the priming technique. This technique was originally developed by cognitive psychologists studying semantic networks, that is, how certain concepts relate to each other (e.g., house to city) and what properties are seen as belonging to a certain concept (e.g., window to house).³² In order to find out how closely other concepts and certain properties are related to a given concept (e.g., house), this critical concept is presented as a prime word (mostly subliminal) and then immediately thereafter (less than 600ms) the other concept or a property is presented as a target word (because of the subliminal presentation and/or the short stimulus onset asynchrony no conscious involvement is possible). Research participants are asked to pronounce the target word as fast as possible (reading speed is assessed) or to classify it as a word or nonword via pressing a button (lexical decision speed is assessed). High speed (in comparison to control pairings of a letter string as the prime) is taken as an indication that a strong associative link exists

³⁰ Cf. Bargh, Gollwitzer, et al. 2001.

³¹ Cf. Schmitz 2011.

³² Cf. Neely 1977.

between the prime word and the target word, because the prime word managed to increase the accessibility of the target word. Certainly, participants are aware of their task to read the target words or classify them; what stays outside of awareness however is the activation process itself and the consequent speed-up of responses.

Social psychologists have used the priming technique to find out which properties belong to certain stereotypes, for instance, the stereotypes we hold of men, women, or the elderly.³³ In such studies, words specifying men, women, or the elderly are used as primes and a variety of different properties as targets. If the accessibility of certain property-related words is observed to be heightened by the primes describing critical groups of individuals (e.g., men, women, etc.), these properties are assumed to belong to the stereotypes people hold with respect to the members of these groups. Bargh went one step further and extended this type of research to actual behavior as the target (concept-behavior priming).³⁴ He assumed that not only stereotypical beliefs are activated when prime words describing certain categories of people (e.g., men, women, the elderly) are used but also the respective behavior. In support of his assumption he observed that research participants who had been primed with the concept of the elderly showed a slower walking speed when leaving the experiment. This observation encouraged Bargh to also attempt goal priming.³⁵ He assumed that goals (like stereotypes) are mentally represented and thus can be primed as well. A goal that has been activated by priming should therefore also be in a position to instigate behavior that is directed towards goal attainment. Numerous studies supported this assumption. Subsequent research showed that goal-primed individuals still experience themselves as acting in a certain way and this is true no matter whether the goal prime was presented supra- or subliminally. What stays outside of the goal-primed person's conscious awareness however is the fact that the goal prime has affected her/his behavior in the direction of goal attainment. This can lead to feelings of irritation when the primed goal (e.g., wanting to be a winner) produces a type of behavior that is violating a given norm (e.g., being friendly and cooperative to strangers). This phenomenon, referred to as explanatory vacuum, nicely attests to what is at the center of nonconscious goal priming: The person does not know that a goal prime has influenced her behavior (i.e., it is not a lack of awareness of the goal prime or a lack of awareness of being involved with some kind of goal-directed actions).

³³ Cf. Moskowitz, Gollwitzer, Wasel, and Schaal 1999.

³⁴ Cf. Bargh, Chen, and Burrows 1996.

³⁵ Cf. Bargh 1990.