This is [not] who I am : understanding identity in continued smoking and smoking cessation

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CHAPTER 1

INTRODUCTION

I am working in the health area, but that's what they say, it's easier to teach something to someone else than to do it yourself. I have that, that causes friction. Like, for example, that I smoke, people always say "it does not fit with you". And initially.. It sounds so stupid, with whom would it fit? What would that be? But actually it does not fit with me at all.. And, and my job, and, and… Things that I find important. (Esther, smoker for eight years)

I find myself a real, I find myself a real smoker yes. Yes. Yes. I don't really know why though, but err, yes. I find err... yes. You have these people who smoke and you think, yeah, are you, you just shouldn't smoke, because it is, it looks ridiculous, sorry, but err yes (…) *but I find myself a real smoker, yeah. I think it really fits with me, yeah.* (Louis, smoker for 30 years)

These are quotes from two smokers, Esther and Louis, who smoked 23 and 20 cigarettes per day, respectively. Although their smoking behavior is similar, the role that smoking plays in the way they see themselves is very different. Whereas Louis appears to feel comfortable with being a 'real smoker', Esther feels that smoking conflicts with her job, the things that she finds important in life, and, essentially, with who she is. Esther experiences a discrepancy between her behavior and the way that she perceives herself, her identity. Such a discrepancy may be the start of a process of quitting smoking. Other smokers, such as Louis, perceive smoking as fitting with who they are, and do not experience the friction that Esther experiences. These identities in relation to smoking and quitting are the focus of this dissertation. Specifically, this dissertation examines how different identities that are relevant to smoking affect smoking behavior (RQ1); how identity changes over time (RQ2); and whether associations between identity and smoking-related outcomes, as well as identity change processes, differ between people with lower and higher socio-economic status (RQ3).

The problem of smoking

Smoking constitutes a major health problem worldwide. The consequences of smoking are well known: smoking tobacco is a major risk factor for various severe diseases such as cancer, cardiovascular diseases and lung diseases; smoking negatively affects surgery outcomes; and smoking during pregnancy harms the unborn child both in the short term and long term, amongst other effects (US Department of Health and Human Services, 2014). In the Netherlands alone, smoking leads to the estimated premature death of 20.000 smokers per year, who on average die ten years earlier than nonsmokers (Nationaal Expertisecentrum Tabaksontmoediging, 2015). The associated health care costs are estimated to be almost 3 billion euros annually (Nationaal Expertisecentrum Tabaksontmoediging, 2015). In addition, smoking is associated with subsequent depression and anxiety (Fluharty, Taylor, Grabski, & Munafo, 2017). Conversely, quitting smoking not only improves physical health outcomes, but also increases psychological

well-being (Krebs et al., 2016). Smokers typically are aware of the dangers of smoking and the advantages of quitting smoking, and around 80% of smokers in the Netherlands want to quit smoking in the future. Nevertheless, many smokers continue to smoke and the large majority of smokers who attempt to quit relapse. Each year, around 30% of Dutch smokers attempt to quit, but around 90% of them relapse within a year (Nationaal Expertisecentrum Tabaksontmoediging, 2015).

Smoking and socio-economic status

Importantly, smoking is more prevalent and persistent among those with lower socio-economic status (i.e., a person's relative position in the social hierarchy (Mackenbach & Kunst, 1997)), and thereby increases health inequalities (Bricard, Jusot, Beck, Khlat, & Legleye, 2016; Reid, Hammond, Boudreau, Fong, & Siahpush, 2010). In the Netherlands in 2015, 26% of people with lower socio-economic status (SES) were smokers, compared to 12% of those with higher SES (Nationaal Expertisecentrum Tabaksontmoediging, 2016). Lower SES-smokers have weaker intentions to quit, are less successful when attempting to quit, and experience a quit attempt more negatively than their higher SES counterparts (Fernandez et al., 2006; Pisinger, Aadahl, Toft, & Jorgensen, 2011; Reid et al., 2010; Wetter et al., 2005). Moreover, antismoking measures such as mass media campaigns are less effective among lower SES smokers than higher SES smokers (Giskes et al., 2007; Nagelhout, Willemsen, & de Vries, 2011).

Lower SES smokers are more likely to be part of groups in which smoking is common, whereas higher SES smokers are more likely to find themselves in groups that encourage them to quit (Honjo, Tsutsumi, Kawachi, & Kawakami, 2006; Sorensen, Emmons, Stoddard, Linnan, & Avrunin, 2002; Wiltshire, Bancroft, Parry, & Amos, 2003). As such, lower SES smokers who attempt to quit may have to swim against the tide, whereas higher SES smokers are more likely to conform to the social norms in their environment by quitting smoking. For example, a qualitative study among blue-collar workers showed that quitting smoking was perceived as 'leaving the gang', and that group members attempted to evoke relapse to keep the quitter within the group (Katainen, 2012). Relatedly, social support for quitting smoking is less available for lower SES smokers (Pisinger et al., 2011; Sorensen et al., 2002), while we know that receiving social support for quitting is associated with stronger intentions to quit, quitting self-efficacy, adaptive coping and, importantly, quit success (Rayens, Hahn, & Nicholson, 2011; Rice et al., 1996; Sorensen et al., 2002; Webb Hooper, Baker, & McNutt, 2013). Taken together, this means that lower SES smokers, for whom quitting smoking is more difficult than for higher SES smokers, have fewer health-promoting resources that may help them to quit successfully.

Why traditional theories are limited in their explanations of smoking behavior

Two influential psychological theories -the theory of planned behavior (Ajzen, 1988, 1991) and social cognitive theory (Bandura, 1991, 2001)- can and have been used to explain continued smoking and quit attempts. The theory of planned behavior proposes that behavior results from intentions to engage in behavior, which results from social norms, attitudes and perceived behavioral control. As such, smokers who perceive that other people disapprove of smoking and approve of quitting, who evaluate smoking negatively, and perceive that quitting smoking is relatively easy for them should form stronger intentions to quit smoking, and subsequently attempt to quit. Social cognitive theory proposes that people are agents who steer their own behavior in the context of factors associated with the behavior (e.g., skills), cognitions (e.g., outcome expectancies) and the environment (e.g., other people's behaviors). The regulation of behavior is strongly affected by self-efficacy, that is, individuals' perceptions of their capability to perform the behavior (Bandura, 1991, 2001), with people who endorse stronger self-efficacy beliefs being more inclined to persist in the face of difficulty. In addition, behavior is motivated by anticipation of future outcomes of the behavior. As such, smokers who feel capable of quitting and believe that quitting will result in better health are more likely to attempt to quit. Furthermore, people learn new behaviors and adapt existing behavioral patterns as they observe others and engage in similar behaviors (Bandura, 1969).

Although the processes described by the theory of planned behavior and social cognitive theory are well supported, both theories are limited in that they rely heavily on rational factors to explain intentions and behavior, and leave a large share of the variance in intentions and behavior unexplained. For example, theory of planned behavior variables typically explain a maximum of 40% of variance in behavioral intentions, leaving at least 60% of variance unexplained (Rise, Sheeran, & Hukkelberg, 2010). Applying this to smoking means that it is not sufficient for smokers to believe that smoking leads to disease, that other people disapprove of smoking, or that they are capable of quitting, in order for them to quit (e.g., Høie, Moan, & Rise, 2010).

A main proposition of this dissertation is that smoking cessation is compromised when cognitions about the dangers of smoking and advantages of quitting are not sufficiently relevant to the *self*. We propose that smokers should perceive smoking as conflicting with who they are and who they want to become in the future, and nonsmoking as fitting with who they are now and who they want to become, for them to quit smoking. Such self-perceptions are more fundamental, and therefore imbued with stronger emotions, than perceptions of behaviors as being good or harmful, or leading to beneficial or undesirable outcomes. Interestingly, a meta-analysis showed that self-identity explains additional variance in health behavioral intentions beyond the traditional theory of planned behavior variables of attitude, perceived behavioral control and social norms (Rise et al., 2010). Furthermore, although identity does not play an important role in

social cognitive theory, Bandura occasionally mentioned identity as an influence on behavior. For example, he stated that "Those who have a firm sense of identity and are strongly oriented toward fulfilling their personal standards display a high level of self-directedness. Those who are not much committed to personal standards adopt a pragmatic orientation, tailoring their behavior to fit whatever the situation seems to call for" (Bandura, 1991, p. 253). In other words, identity may serve as a stable source of behavior (West, 2006), and is therefore very likely to be relevant in the context of smoking. The sections below will explain what identity is, and what is already known about the relationship between identity and smoking.

What is identity?

Identity refers to the core perceptions that we, as humans, have of who we are. Identity has been studied widely, and many different conceptualizations and theories of identity have been forwarded. A fundamental question is whether identity, the essence of who we are, can change after adolescence which is typically considered as the main period in which identity is formed (Erikson, 1968). Approaches that conceptualize identity as stable describe identity as a collection of unchanging characteristics that people perceive themselves to have (e.g., Hagger, Anderson, Kyriakaki, & Darkings, 2007; Hitlin, 2003), or as a set of personally relevant values, such that people perceive themselves in terms of their 'ideals worth striving for' (Hitlin, 2003, p. 121). In line with this reasoning, people prefer to perceive themselves in a consistent way, such that they actively search for information about themselves that verifies their self-perceptions, and may also ignore or reject information that is discrepant with their identity (Asencio & Burke, 2011; Markus & Kunda, 1986). However, in this dissertation it is assumed that identity can change. In other words, people may perceive themselves differently in different (social) situations and identity may develop over time (Markus & Kunda, 1986). For example, identity theory (Stets, 2006) states that identity is based on the social roles that people have, such as the role identity as a partner or teacher. According to this theory, people's self-perceptions are based on the behaviors, meanings and expectations that are associated with these roles, and people behave in line with the roles that are central to their identity in a given situation. Similarly, the active self account suggests that people hold multiple self-concepts, of which only a subset is active in the 'active self-concept' and exerts influence on behavior (Wheeler, Demarree, & Petty, 2007).

Two theoretical approaches are particularly relevant for this dissertation: PRIME theory of motivation (West, 2006) and the social identity approach (Tajfel & Turner, 1979, 1986; Turner, Hogg, Oakes, Reicher, & Wetherell, 1987). PRIME theory was developed to explain addiction, and states that identity affects behavior more strongly than other representations (e.g., outcome expectations such as 'smoking causes COPD') (West, 2006). Identity consists of labels (e.g., 'I am a nonsmoker'), attributes (e.g., 'independent')

and rules (e.g., 'I stay abstinent'). An important tenet of PRIME theory is that behavior results from the balance in a specific moment between wants - such as anticipation of pleasure, and needs - such as anticipation of relief. For example, when smokers who are in the process of quitting smoking encounter a situation in which they might smoke, the balance between their needs and urges to smoke or to refrain from smoking at that specific moment will affect whether the individual will smoke or not. Identity directly affects these wants and needs through the rules associated with the identity, whereas intentions and beliefs are further away from behavior. As such, a deeply embedded identity is a source of stable behavior, whereas intentions and beliefs are less likely to influence the impulses and urges that may strongly fluctuate across situation and over time. We therefore expect smokers who strongly perceive themselves 'to be' smokers to continue smoking, and to be more likely to relapse if they attempt to quit, whereas we expect smokers who identify more strongly with nonsmoking to be more likely to quit smoking successfully.

PRIME theory does not specify the sources of identity, but other theories shed light on how identities are formed. The social identity approach (Turner et al., 1987) states that a large part of identity is based on memberships in groups or social categories, such that people may hold a social identity for example as a student or woman, or as a smoker or nonsmoker. People are motivated to behave in line with the group's social norms when their social identification with the group is strong (Tajfel & Turner, 1979, 1986). As such, compared to smokers who identify with nonsmokers, those who strongly perceive themselves as part of the group of smokers are more likely to engage in smoking behavior, in line with the norms associated with their social smoker identity. As people are part of multiple groups, they also hold multiple social identities. However, only those identities that are salient in a given situation exert an influence on behavior, and thus behavior depends on which identities are salient in a particular context. In addition to social identities, people have a personal identity, which refers to a person's perception of the self as a unique person that is different from others.

This dissertation integrates PRIME theory and social identity theory, and focuses on 'self-identity' and 'group-identity' in relation to smoking. Self-identity refers to perceptions of the self as a person, which can be based on certain behaviors. For example, a strong smoker self-identity means that smoking as a behavior is important for how a smoker perceives himself. As shown in the quote above this introductory chapter, engaging in the behavior of smoking is not necessarily associated with a strong smoker self-identity. Instead, smokers may identify more strongly with quitting or nonsmoking (i.e., perceive quitting or nonsmoking as fitting with who they are) than with smoking. Based on PRIME theory, we maintain that strong self-identities are a stable guide for behavior. The concept of self-identity is different from the construct of personal identity in social identity theory, which concerns an individual's self-perception as being dif-

ferent from other people. As such, self-identities (e.g., as a smoker) may be part of an individual's personal identity as a unique human being. Group-identity refers to the part of a person's identity that is based on membership in groups, and thereby resembles the construct of social identity in the social identity approach. For example, a smoker with a strong smoker group-identity identifies strongly with other smokers and perceives himself as a member of this group. In analogy with self-identity, smokers may identify more strongly with nonsmokers than with smokers. Self-identities and group-identities, together, define how smokers and ex-smokers perceive themselves in relation to smoking.

Finally, in addition to current self-perceptions, people have expectations of who they will become in the future, that is, their possible selves (Markus & Nurius, 1986). Possible selves "represent individuals' ideas of what they might become, what they would like to become, and what they are afraid of becoming" (Markus & Nurius, 1986, p. 954), and can therefore be positive or negative. For smokers, the identities as quitter or nonsmoker mentioned above can be conceived of as possible selves. For example, smokers who identify with nonsmoking hold an ideal possible self as a nonsmoker. Possible selves provide a source of motivation for behavior in the present. People are motivated to engage in behavior that will lead them to become their ideal possible self, and to avoid behavior that will lead them to become their feared possible self (Barreto & Frazier, 2012; Oyserman & James, 2011). Possible selves may also shape the evaluation of a current identity, such that a current identity as a smoker may be evaluated more negatively in the light of a feared possible self as an ill continuing smoker than with reference to an ideal possible self as an occasional smoker without health problems (Markus & Nurius, 1986). In sum, this dissertation focuses on self- and group-identities relevant to smoking and quitting, which can be current selves (as a smoker) or possible selves (as a nonsmoker or quitter). Identities are assumed to be changeable over time.

How does identity change?

Different aspects of identity are likely to be important across different situations, as was stated above. However, in addition to such changes, which are likely to be relatively subtle, identity may also change more profoundly. Identity shift theory (Kearney & O'Sullivan, 2003) proposes that people may come to perceive themselves differently in response to negative experiences associated with their current identity. Specifically, accumulating evidence of conflict between behavior and values may initiate identity change. For example, a smoker who is smoking outside in the rain may experience conflict between this behavior and important values such as independence. Subsequent changes in identity affect, and are effected by, behavior change. Identity control theory (Burke, 2006) also suggests that identity change is initiated by conflict. Specifically, this theory proposes that an identity change process is initiated by conflict between mean-

ings of two identities such as the identities as smoker and parent, or by conflict between an identity and self-relevant meanings in a situation, for example being a smoker and becoming pregnant. People are then motivated to change the meaning of an identity to make it more compatible with another, more important identity, or with self-relevant meanings of the situation. For example, smokers may come to perceive their identity as a smoker in less negative terms in order to decrease conflict with their identity as a parent. They may come to perceive their smoking as actually being positive because of their belief that quitting smoking would make them irritable in the presence of their children. In sum, both identity shift theory (Kearney & O'Sullivan, 2003) and identity control theory (Burke, 2006) propose that identity change is initiated by a conflict that people wish to resolve.

The social environment also plays a role in identity change. For example, work on identity compatibility shows that people more easily adopt new identities that fit in with their social environment (Iyer, Jetten, Tsivrikos, Postmes, & Haslam, 2009). Furthermore, two recently developed models underscore the contribution of the social environment to activating and strengthening new identities in the process of recovery from addiction. According to the Social Identity Model of Cessation Maintenance (Frings & Albery, 2015), therapeutic groups may facilitate the activation of recovery identities, for example 'I am a person in recovery from alcohol abuse'. Individuals may also derive self-esteem and self-efficacy from group membership. Recovery identities can be strengthened when groups provide social support for cessation maintenance, and encourage recovering individuals to behave corresponding with pro-recovery group norms. Similarly, the Social Identity Model of Recovery states that recovery identities are strengthened when shared with other members of social groups who favour recovery (Best et al., 2015). When individuals become increasingly identified with the group - and internalize its norms and values - the new social identity and its associated norms will guide subsequent behavior. Eventually, behavior becomes increasingly dependent on rooted identities and increasingly independent of social norms.

Identity and smoking

There is already existing research suggesting the importance of identity in relation to smoking behavior. In general, smoker identities have been investigated more than non-smoker identities. Controlled for other important factors, smokers who identify more strongly with smoking as a behavior or with the group of smokers have weaker intentions to quit, whereas smokers who identify more strongly with quitting have stronger intentions to quit (Høie et al., 2010; Moan & Rise, 2005, 2006; Van den Putte, Yzer, Willemsen, & de Bruijn, 2009). Moreover, longitudinal studies have shown that smokers who identify more strongly with quitting and less strongly with smoking are also less likely to attempt to quit (Moan & Rise, 2005, 2006; Van den Putte et al., 2009). In line

with this, smokers who liked being a smoker were less likely to have attempted to quit six months later (Tombor, Shahab, Brown, & West, 2013), and adolescent smokers with stronger smoker self-identities increased their smoking over time (Hertel & Mermelstein, 2012). Furthermore, intervention studies showed that smokers with a weaker smoker self-identity, a stronger nonsmoker self-identity and negative images of the typical smoker were more likely to be abstinent after treatment (Gibbons & Eggleston, 1996; Shadel, Mermelstein, & Borrelli, 1996). As such, previous work has shown that identity is associated with intentions to quit smoking and smoking cessation. In addition, there is some evidence to suggest that identity may change over time among smokers who quit smoking. Two retrospective qualitative studies among ex-smokers showed that they redefined themselves in the process of quitting, such that they came to perceive themselves more as nonsmokers over time (Brown, 1996; Vangeli & West, 2012). Social support and identification with other quitters appeared to facilitate the identity change toward a nonsmoker identity in these studies. Smokers may also continue to perceive themselves (in part) as smokers after they quit smoking, although identification with smoking decreases with longer abstinence (Vangeli, Stapleton, & West, 2010). In sum, existing work showed that identity is important for smoking and smoking cessation, and that identity may change over time among smokers who quit smoking.

Furthermore, some novel work was published while the studies presented in this dissertation were performed. The finding that ex-smokers come to perceive themselves less as smokers and more as nonsmokers following a successful quit attempt (Brown, 1996; Vangeli et al., 2010) was confirmed by a prospective quantitative study (Tombor, Shahab, Brown, Notley, & West, 2015) and a retrospective qualitative study (Luck & Beagan, 2015). In addition, the prospective study showed that ex-smokers who come to perceive themselves as nonsmokers over time are more likely to stay abstinent (Tombor et al., 2015). Furthermore, the retrospective qualitative study suggests that identification with nonsmoking may be enhanced by changes in meaningful behaviors, for example when ex-smokers replace smoking by physical exercise, which can be a way of expressing the new identity (Luck & Beagan, 2015). Finally, a longitudinal study among adolescents also shed some light on how identity may change, showing that as smokers become more inclined to smoke in order to cope with negative emotions smoker self-identities increase over time (Hertel & Mermelstein, 2016). In addition, in this study male smokers who increasingly smoked for social reasons also came to perceive themselves more strongly as smokers over time. In sum, these recent studies confirm the key role of identity. They show that identity may change after quitting smoking, suggest that identity change may facilitate successful quitting, and provide some insight into how identity may change.

What does this dissertation contribute?

Several questions remained unanswered in the existing literature, and guided the studies that are presented in this dissertation. First, the relative importance of smoker, nonsmoker and quitter self- and group-identities for smoking behavior is unknown, as these identities have as yet not been studied jointly. Chapters 2, 3, 5 and 6 therefore examine how different identities that are relevant to smoking affect smoking behavior (RQ1; see Table 1).

Table 1. Examination of associations between identity constructs and smoking-related variables (RQ1) and moderation by SES (RQ3) in the chapters in this dissertation.

	Smoking-related variables (RQ1)			SES (RQ3)	
Identity constructs	***Intention to quit***	***Smoking behavior***	***Responses to smoking ban in hospitality venues***	***Differences in identity strength***	***Moderation association identity and smoking-related variables***
Self-identity					
Nonsmoker	2, 3, 5	2, 5	2	2,3	2, 3
Quitter	3, 5, 6	5, 6		3	3, 6
Smoker	2, 3, 5, 6	2, 5, 6	2	2,3	2, 3, 6
Group-identity					
Nonsmoker	2, 3, 5	2, 5	2	2,3	2, 3
Quitter	3, 5			3	3
Smoker	2, 3, 5, 6	2, 5, 6	2	2,3	2, 3, 6

Note. Numbers in the table refer to the chapters in this dissertation. Given the deductive nature of the study presented Chapter 5 (interpretative phenomenological analysis), the analysis in that chapter focused on a broader range of identity constructs than those mentioned here.

Second, the process of identity change - both before and after a quit attempt - largely remains unclear. Chapters 4 to 7 investigate how identity changes over time in smokers and ex-smokers, both spontaneously and in response to an intervention, and what factors affect identity change (RQ2; see Table 2).

Third, differences in smoking behavior and social environments between lower and higher SES smokers lead us to expect that identities in relation to smoking differ with SES as well. However, little is known about possible effects of SES on identity processes, although such effects are very likely. To this end, Chapters 2, 3, 6 and 7 examine whether associations between identity and smoking-related outcomes - as well as identity change processes - differ between people with lower and higher SES (RQ3; see Tables 1 and 2). These three research questions are examined in different studies that, together, offer a comprehensive analysis of identity and identity change (see Figure 1). A multi-method approach is employed, including cross-sectional and longitudinal studies; observational and experimental studies; and quantitative as well as qualitative methods.

Table 2. Examination of change in identity constructs (RQ2) and moderation by SES (RQ3) in the chapters in this dissertation.

Factors related to identity change	Identity change (RQ2)			SES (RQ3)
	Quitter self-identity	*Smoker self-identity*	*Smoker group-identity*	*Moderation association factors[a] and identity change*
Smoking behavior	5, 6, 7	5, 6, 7	5, 7	6
Intention to quit	6	6	6	6
SES	7	7		
Psychosocial factors[b]	7	7		
Psychological processes[c]	5	5	5	
Intervention (writing exercise)	4			

Note. Numbers in the table refer to the chapters in this dissertation. Given the deductive nature of the study presented Chapter 5 (interpretative phenomenological analysis), the analysis in that chapter focused on a broader range of identity constructs than those mentioned here.
a. Factors mentioned under "Factors related to identity change".
b. Attitude, perceived health damage, social norms, stigma, acceptance, self-evaluative emotions, health worries, expected social support.
c. As identified (deductively) in the longitudinal interpretative phenomenological analysis study.

In Chapter 2, we use a longitudinal survey with a one-year follow-up among 189 daily smokers to examine how smoker and nonsmoker self- and group-identities and socio-economic status (SES) may predict intention to quit, quit attempts and responses to antismoking measures, in this case, the Dutch smoking ban in hospitality venues (RQ1). In addition, we examine whether these relations are moderated by SES (RQ3), and whether identity predicts quit attempts and responses to antismoking measures beyond intention to quit. This study is the first to directly compare the unique effects of smoker and nonsmoker self- and group-identities, and to examine differences in relations between identity and smoking outcomes between SES groups. It provides new insight into the relative importance of smoker and nonsmoker self- and group-identity, and shows the relevance of considering SES.

Chapter 3 presents the findings of a cross-sectional study among 387 daily smokers. This study investigates how SES is associated with smoking behavior, taking social support and identity factors into account, thereby extending the study presented in Chapter 2. We examine SES differences in the social support that smokers desire and expect to receive if they were to quit smoking, and in the strength of smoker, quitter and nonsmoker self- and group-identities (RQ3). To advance understanding of the role of group identification, we use a comprehensive measure of group-identity that comprises ties (i.e., perceptions of similarity to- and belongingness with group members), centrality (i.e., cognitive centrality of the group), and affect (i.e., feelings associated with

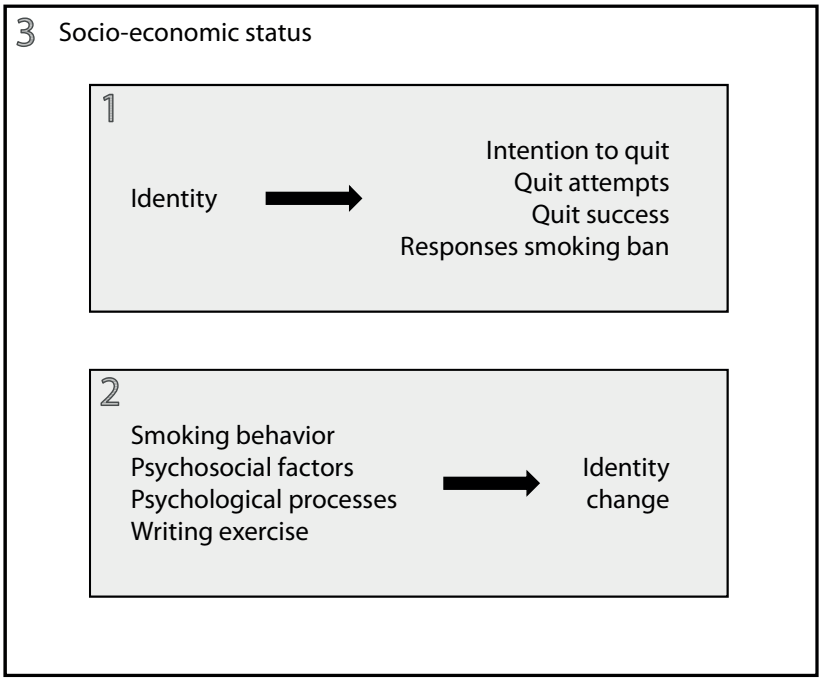

Figure 1. Overview of the research questions that are examined in this dissertation.

group membership) (Cameron, 2004). Furthermore, we use expected social support and identity factors to predict intentions to quit smoking (RQ1), and examine whether these associations differ between lower, middle and higher SES smokers (RQ3). This study shows which particular identity constructs are related to intentions to quit, and highlights the importance of the social environment for lower and higher SES smokers who intend to quit smoking.

Chapter 4 describes the results of an experimental study that examines whether identification with quitting smoking can be strengthened through a writing exercise (RQ2'. This is the first study to attempt to increase identity in the context of smoking. In addition, we examine whether identification with quitting can be facilitated by expected social support for quitting, which is manipulated through experimental vignettes. The study uses a 2 (identity: strengthened quitter identity vs. control) x 3 (social support: present vs. absent vs. control) between-participants design and includes 339 daily smokers who are randomly assigned to the experimental conditions. Results provide insight into the content of smokers' self-conceptualizations as quitters, and provide important building blocks for future research into strengthening identities relevant to smoking cessation.

Chapter 5 presents the in-depth findings of a longitudinal qualitative study on identity change in the process of quitting smoking (RQ1, RQ2). Ten smokers with an intention to quit within two months - including Esther and Louis, whose quotes were shown above –

are interviewed three times over the course of two months. Data are analyzed according to the principles of Interpretative Phenomenological Analysis, which focuses on how people make sense of their experiences and therefore fits very well with the study aims. To date, qualitative work on changes in smoking-related identities is scarce, and no prospective longitudinal studies exist. Importantly, a major benefit of longitudinal work is that identity dynamics can be observed as they occur, whereas retrospective studies may be prone to (recall) bias and are therefore restricted in the identity change processes that they are able to show. In addition, a long-term follow-up allows us to relate the identity dynamics observed in the interviews to smoking status approximately two years later. The findings provide an in-depth understanding of the dynamics of identity change and the mechanisms through which identity change may occur, the factors that may facilitate or hamper this identity change process, and the ways that people find to protect a positive sense of self when they are unsuccessful in quitting smoking.

Chapter 6 examines the reciprocal relations between identity constructs (i.e., smoker self-identity, quitter self-identity and smoker group-identity), and intention to quit and smoking behavior among a large longitudinal sample of 1036 smokers and ex-smokers, using cross-lagged structural equation modeling as an advanced statistical technique (RQ1, RQ2). Moreover, we test whether these relations differ between SES-groups (RQ3). This study is the first large-scale prospective study to disentangle relations between identity and smoking behavior. The results show how identity is related to (subsequent) smoking behavior and intention to quit over time, and vice versa. The findings are replicated using a cross validation sample.

Finally, Chapter 7 examines identity changes over time among both smokers and ex-smokers (RQ2), and whether these changes can be predicted by SES (RQ3) and relevant psychosocial factors (i.e., attitude, perceived health damage, social norms, stigma, acceptance, self-evaluative emotions, health worries, expected social support). This study compliments the studies presented in Chapters 5 and 6 and adds to the understanding of identity change processes. We examine identification with smoking (i.e., smoker self-identity) and quitting (i.e., quitter self-identity) among a large sample of smokers (n = 742) and ex-smokers (n = 201), which allows us to examine identity change both before and after quitting. Latent growth curve modeling is used to model and predict identity change, and results are cross validated beyond the initial sample. This study shows differences in identity development between lower and higher SES smokers and ex-smokers, and identifies which psychosocial factors should be addressed in interventions and campaigns aimed at identity change.

The results of the individual studies described in Chapters 2 to 7 are summarized and integrated in the Discussion. In addition, the implications and limitations of this dissertation are discussed. More insight into identity has the potential to advance theories on identity - such as PRIME theory and the social identity approach - and health

behavior theories more broadly. At a societal level, a deeper understanding of identity and identity change processes among both lower and higher SES groups may serve as the basis for more effective smoking cessation interventions and antismoking measures that help more smokers to quit. Taken together, the studies in this dissertation examine how identity affects smoking behavior, how identity changes, and how these processes differ with SES. It aims to show how smokers like Esther, Louis and many others may move toward becoming a nonsmoker and gain successful abstinence from smoking.

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