

# Dissertation

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# **Interactions of accent and appearance in social categorization, impression forma- tion, and economic decisions**

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# 1 Introduction

Come writers and critics  
Who prophesize with your pen  
And keep your eyes wide  
The chance won't come again  
And don't speak too soon  
For the wheel's still in spin  
And there's no tellin' who  
That it's namin'.  
For the loser now  
Will be later to win  
For the times they are a-changin'

*The Times They Are A-Changin'*  
Bob Dylan

Indeed, the times are changing rapidly. In the past century many political and economic, but also social and psychological changes occurred in Europe and all around the world. In today's world of immigration, we meet many new people on our ways and the people we meet have increasingly different cultural backgrounds. The continuing flow of individuals and populations ensures that immigration remains and will remain high on the social and political agenda. Immigration is changing our world and different kinds of national and ethnic distinctions that were in use for centuries are becoming outdated and inaccurate (e.g., Scheffer, 2011). At the same time technology is changing our ways of communication. To contact others we use different media, for instance e-mail that conveys text and pictures, phone or voice chat that provides us with sound, or video-conference that combines both. Often we form our impressions of people based on this information. Usually, when we see or hear a

person his or her appearance and voice do not contradict our expectations about his or her ethnicity, but as societies are becoming more multicultural, we encounter such surprises more often.

The goal of this dissertation is to investigate how people evaluate others based on their appearance and accent in speech, when one of these cues indicates that the person is an outgroup member (e.g., looks Turkish) and the other that the person is an ingroup member (e.g., speaks with a standard German accent). We also examine how the impression differs depending on the sequence of revealing accent and appearance information. We also study how these processes unfold for different accents: standard, foreign, and a non-standard but native regional accent. Finally, we study how accent-based discrimination can be prevented.

We start this introduction with a broader view and narrow it down to the specific focus of this research. First, using an example of Germany, we present a socio-cultural landscape of new immigration countries. We describe the situation of Turkish minority in Germany, as we conducted our studies in this context. Subsequently, as we study discrimination based on accent and appearance, we move to an interdisciplinary view of ethnic discrimination, with a focus on language- and accent-based discrimination. Later, we present different explanations of why nonstandard-accented speakers are discriminated. We shortly discuss that both accent and appearance can be indicators of one's ethnicity, and that ethnicity could be seen as a continuum rather than clear-cut categories. Further narrowing our focus, we introduce recent psychological and economic experiments that contrast appearance and accent and study how these two cues influence impressions of and behaviors towards standard- and non-standard-accented speakers. We end with the outline of the current dissertation.

## **1.1 Germany as a New Immigration Country**

In the current dissertation we look at the perception of people based on how they look and speak in the context of immigrants to Western European countries. We conduct our experiments in Germany and study reactions towards members of the Turkish minority.

We think that similar processes could be also observed in different countries and with different ethnic minorities like in the case of the Turkish minority in the Netherlands or the Moroccan minority in France.

As many other Western European countries, in the 20th century Germany has experienced an increased flow of immigration (Cohn-Bendit & Schmid, 1992). Compared to countries such as United States, Canada, or Australia, large scale immigration to Europe can be considered a recent phenomenon (Scheffer, 2011). Consequently, perception of one's country as multicultural is not (yet) strongly embraced by the societies. Furthermore, although there is an increasing number of (especially second and third generation) immigrants who speak a standard language or even a local dialect, they are rather expected to speak with a foreign (i.e., in case of Germany Turkish) accent.

The biggest ethnic minority in Germany is a Turkish minority. In Germany 19% of the population has immigration background and 8.2% has a non-German citizenship. From the 8%, Turkish citizenship has 25% (2.1% of the population), what makes them clearly the biggest immigrant group (Federal Ministry of the Interior, 2007). The general immigrants share is growing and in the southwest of the country in big cities 60% of children aged five years and younger have at least one parent born abroad (Federal Government for Migration Refugees and Integration, 2007). The Turkish minority is often seen as problematic in terms of adapting to living in Germany (Schütz, 2010; Wilson, 2006). General attitudes towards Turks are rather negative, with a predominant opinion being that instead of integrating into the German society, they form ghettos (Klingst & Drieschner, 2005; Spiegel TV, 2009). This attitude can be observed in everyday life, as well as in the mass media and on the Internet. In the last two years (May 2010 – May 2012) the word *Turks* has been most often searched on the Internet in Germany in the phrase *how many Turks*; in the top 10 searches were also the phrases *jokes about Turks* and *against Turks* (Google Insights for Search, 2012). Additionally, in the top 10 rising searches were *German for Turks* and a negative expression for *Turkish sayings*. As can be seen, language plays an (in-

creasingly) important role in the perception of people with Turkish origins. And how did their immigration start?

Originally, the Turkish minority in Germany was comprised of guest workers employed in low qualification jobs (Scheffer, 2011). Starting already in the 1950's and 1960's they were invited to work in Germany for a few years and, as the name *guest workers* indicates, then go back to Turkey. They were not expected to integrate, were located in the same buildings and districts as other guest workers and were rather separated from the German society. However, many of them stayed in Germany and instead of guests, quite unexpectedly for the rest of the society, became residents of the country.

Since then, numerous sociological studies have demonstrated that many children with Turkish immigrant backgrounds have problems at various stages of education (e.g., B. Becker, 2010). As a main reason for this situation researchers and teachers indicate deficits in the German language skills of immigrant children (e.g., Esser, 2006), which shows again how important language issues are in the debate about the Turkish minority. Many Turkish children have problems at school, but there are also some who gained a good education and succeeded in their later adult lives. Also, since the time of the first guest workers, Germany has also attracted some highly qualified and educated Turks. Therefore, discrimination is not only a socially negative phenomenon, but also German companies are losing by (deliberately or not) using an ethnicity criterion and not employing workers who are good, but have a Turkish name, look Turkish or speak with a Turkish accent. Undoubtedly, the difficult situation of the Turkish minority has a negative impact on all areas of Turkish immigrants' lives and the German society in general. With an overview of the history and the current situation of Turkish minority in Germany, possible discrimination of Turkish people in our studies can be better understood.

## 1.2 Interdisciplinary Perspectives on Ethnic Discrimination

To understand discrimination in general, we find insightful to look at it from the perspective of different disciplines and looking at literature from different fields. Discrimination as a separate topic is studied in many disciplines, including psychology, sociology, and economics (Dovidio, Hewstone, & Glick, 2010). While all of them understand discrimination as a prejudicial treatment of and behaviors towards an individual or a group based on their group membership (Dovidio et al., 2010; Kendall, 2012; Rodgers, 2006), they differ in defining a rationale for discrimination and types of discrimination. Whereas in psychology any discrimination is treated as unjustified, economists and sociologists agree that it is negative and harmful for the discriminated, but also distinguish three types of discrimination, and one of them is in these disciplines considered rationally justified.

First, *taste-based discrimination* corresponds to the general understanding of discrimination in psychology. It is a discrimination resulting from simply disliking people with certain characteristics and is associated with a willingness to reduce own profits to avoid interaction with them (G. S. Becker, 1971). Second, two types of *information-based discrimination* are: *statistical* and *error discrimination*. Statistical discrimination is a rational preferential treatment of members of some groups over other groups, when it is known that some groups' average on a specific characteristic or behavior is better than other groups' (Arrow, 1973; England, 1992; Phelps, 1972). For example, if no other information than the ethnicity of two people is given and it is known that on average in Germany people of Turkish origins are worse educated than native Germans, it is rational to assume that from those two people the Turkish person is less educated. While statistical discrimination corresponds to actual differences, the third type, *error discrimination*, does not. Its rationale is similar to statistical discrimination, but it is based on wrong estimates of actual behavior (England, 1992). For example, in Israel Fershtman and Gneezy (2001) found evidence for discrimination based on wrong

ethnic stereotypes: Ashkenazic Jews discriminated Eastern Jews, even though the average performance of the latter was not worse than that of the Ashkenazic Jews.

Researchers in different disciplines try to study discrimination using different methods. It is rather difficult to study discrimination with survey data as differences between treatment of specific groups could be explained not only by their gender, race, or age, but also by characteristics other than those measured in the survey (cf. Bertrand & Mullainathan, 2004). Therefore, both in psychology and economics experiments or quasi-experiments are used to have more control over confounding factors and to establish causal relationships between the sources and outcomes of discrimination. Frequent types of field experiments are audit and correspondence studies. In a recent correspondence study in Germany, the authors wanted to check if names of job applicants can influence their chances to get a job (Kaas & Manger, 2012). They sent over 500 fictitious student internship applications to German firms, and showed that applicants with foreign names (e.g., Serkan or Fatih) had lower chances to get invited for an interview than those with standard German names (e.g., Tobias or Dennis). The bigger the employing firm was, the less space for subjective evaluations and the weaker the discrimination. When applications included reference letters with a favorable opinion about the candidate, the discrimination disappeared, which the authors interpret as evidence for statistical rather than taste based discrimination.

Other similar studies in different countries also showed discrimination of ethnic minorities (e.g., Bertrand & Mullainathan, 2004; Pager, Western, & Bonikowski, 2009). However, all of these studies have used only names (and sometimes photographs), not providing the socially important information about the accent of the applicant. Although for many jobs it might seem to be objectively irrelevant information, studies have shown that accent can strongly influence judgments of candidates' hirability (Bradac & Wisegarver, 1984; Hosoda, Stone-Romero, & Walter, 2007; Purkiss, Perrewe, Gillespie, Mayes, & Ferris, 2006).

Furthermore, many psychological and linguistic studies have shown that nonstandard speakers are perceived as less competent

than standard speakers (for a review, see Gluszek & Dovidio, 2010). *Nonstandard* speakers are defined as people who speak a given language (e.g., German) with a nonnative accent (e.g., Turkish) and, as Figure 1a shows, nonstandard speakers are also native speakers who are using a regional variety of a language (e.g., Saxon dialect). *Standard* speakers are those who speak in a native-like way and without any regional influence (e.g., standard German, in German *Hochdeutsch*). Looking at the terms from the other perspective, whereas *native* and *nonnative* accents intuitively refer to natives and foreigners, native accents also include regional accents. As Figure 1b shows, we also distinguish between *regional accents*, which refer to a particular pronunciation used in a specific geographical region, and *regional dialects*, which are linguistic varieties that differ from each other also in vocabulary and grammar. Furthermore, we refer to *standard German* as the term is used in Germany: meaning both standard grammar and standard accent.

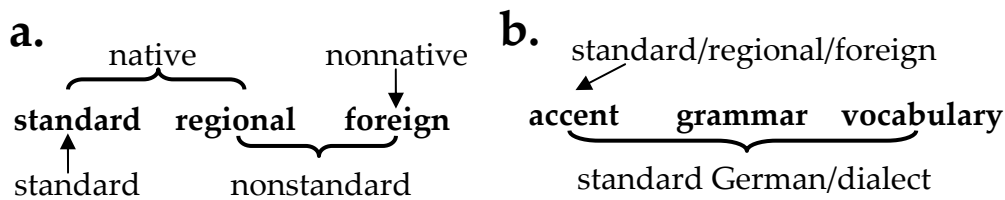


Figure 1. Meaning of terms related to accents (a) and accents and dialects (b).

Studies show that both nonnative speakers and those who speak with a regional dialect or accent are perceived as less intelligent, competent and are rated lower in status than standard speakers (Gluszek & Dovidio, 2010). Although nonstandard (especially dialect) speakers are sometimes perceived as warmer, more compassionate, and trustworthy, a recent meta-analysis found that in general standard-accented speakers are evaluated higher on both competence-related and warmth-related traits (Fuertes, Gottdiener, Martin, Gilbert, & Giles, 2012). Why does this discrimination occur at all?

### 1.3 Accent as a Signal

Accent discrimination is explained in the literature in a number of ways. Explanations refer to different processes on different stages of human history (phylogenetic explanations) and different stages of cognitive development in a child's life (ontogenetic explanations). These explanations are related to each other and what is appearing early in the development is often indicated as early in evolution, and vice versa. All these processes can be present in adolescence and remain for the rest of one's life.

Recognition and preference for own language and accent are present very early in life. Research has shown that many children are sensitive to dialectal variations already at the age of 5 months (Nazzi, Jusczyk, & Johnson, 2000), and they can distinguish and name different accents once they are 5 to 7-years old (Floccia, Butler, Girard, & Goslin, 2009). Recent research has also shown that already 5-6-month-old infants prefer to listen to people who speak their own language rather than a foreign language, and to those who speak their own language without than with a foreign accent (Kinzler, Dupoux, & Spelke, 2007). Furthermore, a nonnative accent was shown to be a more meaningful cue than a regional one (Girard, Floccia, & Goslin, 2008).

Such early recognition of and preference for own accent is often explained by its deep evolutionary adaptive role and it is described as more relevant and important than recognition of and preference for own race (Kinzler, Shutts, Dejesus, & Spelke, 2009). Considering that our ancestors did not and could not travel far during their life, they would not encounter people who (because of distinct climates in different regions) would look very differently. However, they would encounter others speaking in a different way, using a different "dialect" (Cosmides, Tooby, & Kurzban, 2003; Kurzban, Tooby, & Cosmides, 2001). Therefore, recognizing who is from the own group and who is from another based on their language and pronunciation could have evolved a long time ago. When we add to this a basic human preference for own group over other groups, not



only recognition but also a preference for own language and accent seems to be deeply rooted in the history of the humankind.

Stereotype-related aspects supplement the ingroup-outgroup distinguishing function of language. They are observed later in children's life and seem to have evolved later in evolutionary history (Kinzler et al., 2007). For older children, adolescents, and adults, an accent gives socially relevant information about the speaker. Evaluations of the speaker are based on beliefs to which group the person belongs to and on inferences based on this belief (e.g., Ryan, 1983). If we believe someone speaks with a Turkish accent, we will probably infer that he or she has some attributes common among Turks. If we perceived the accent as Norwegian, we would certainly attribute a different stereotype and assume the person might have different attributes. When studying accent attitudes and accent discrimination in adults, a basic preference for own language and accent is also present, but additionally stereotype-based inferences play an important role in perception of the speakers (Dovidio & Gluszek, 2012).

The problem of nonstandard-accented speech can be also approached from two different perspectives, that of the speaker and that of the listener. From the listener's perspective, one interpretation of the negative evaluation of nonstandard-accented speakers can be found within communication accommodation theory (e.g., Giles et al., 1979; Shepard, Giles, & Le Poire, 2001). It indicates that speaking with a nonstandard accent can be seen as not converging to standard pronunciation, which would be expected and desired. Lack of accommodation can be interpreted as a lack of ability to converge or a lack of effort to do so, both rather undesirable.

From the speaker's perspective, an important aspect is what can be done to speak without an accent, and when. Linguists, psychologists and sociologists agree that a native-like pronunciation can be easily learned in childhood, but is difficult to attain after puberty (e.g., Scovel, 2000). A sociologist, Hartmut Esser (2006) has integrated various linguistic and economic determinants of language acquisition in a general language acquisition model. In his model the main determinants of language acquisition are: the motivation for learning the language, the principal opportunity for contact with the lan-

guage, the individual ability of the learner, and the costs. Learning a language at a young age does not require (conscious) motivation, occurs at a low cost, and any child has the potential to learn any language (e.g., B. Becker, 2010; Esser, 2006). Therefore, the main determinant of language acquisition in childhood is access to and contact with native speakers of a given language. This reasoning leads us to a perceiver's perspective and to a conclusion that a native versus a nonnative accent is an indicator whether a person had in his or her childhood a lot of contact with native speakers of a certain language. Even if the grammar and vocabulary used by someone are standard (which could be learned also later in life), from the accent others may infer about the environment in which the person grew up.

Similar phenomena are addressed by ethnolinguistic identity theory (ELIT; Giles, Bourhis, & Taylor, 1977; Giles & Johnson, 1981, 1987). The authors of ELIT argue that language is the most important marker of ethnic identity. Appearance or traditions of ancestors may show a person's ethnic origins and provenance, but a person's identity is best described by the language she or he uses. This applies, again, to both perspectives. A person for whom a first language is Turkish and a second language is German probably *identifies* more with Turks (or the Turkish minority) than with Germans. At the same time, someone who listens to this person can infer that he or she *is* more Turkish than German; and the actual nationality here is less important. Therefore, where ethnicity plays a role, language and accent are important in categorizing and forming impressions of others. Although ELIT does not address the role of appearance, it seems reasonable to think that the role of accent in forming impressions of others can be especially pronounced when encountering people who speak in an unexpected way in relation to how they look. In such a case, accent can be an especially relevant cue for the categorization and evaluation of such surprising people.

#### **1.4 Continuity on the Ethnicity Dimension**

Such surprising people are of especial interest in this dissertation and our main goal is examining how they are categorized and evaluated. There are thousands of studies examining peoples' per-

ceptions of others who belong to another social group. There is also a substantial body of research on social categorization and also crossed categorization, where the latter describes a situation when a person can be simultaneously identified as a member of two or more social groups (e.g., elderly and female). Nevertheless, there are much fewer studies examining perceptions of others whose group membership is ambiguous, who have some characteristics of one group and some of the other. For example, a young Turkish-looking male speaking standard German might be perceived as an ethnically ambiguous person. From his appearance one would infer that at least one of his parents is Turkish and from his accent, according to ELIT, that he is German. Stereotyping and intergroup relations research, as well as language attitudes research, would say that such a person would be perceived in some specific way because he is: young not old, male not female, and a standard not a nonstandard speaker. Nevertheless, categorization can be more difficult when asking whether the person is Turkish or German (for a dynamic model of person construal which postulates continuous face-voice interactivity in social categorization, see the recent contribution by Freeman & Ambady, 2011).

Crossed categorization research addresses an ostensibly similar problem: It says that individuals are simultaneously members of several social groups and at the same time multiple group memberships can be salient (e.g., Crisp, Ensari, Hewstone, & Miller, 2003). Crossed categorization occurs when a person differs from another person on one dimension of social categorization (as an outgroup member) but is similar on another dimension (as an ingroup member). For a young female, a young male would be an ingroup member on the age dimension but an outgroup member on the gender dimension. However, a Turkish appearance and a standard German accent of a person are both indicators of this person's ethnicity; they are very different cues but are both from the same dimension. Therefore, such people might be difficult to categorize and others might be surprised when encountering them. This phenomenon seems to be overlooked in psychological research.

The most similar approach to ours is the recently-emerged concept of feature-based stereotyping (Blair, Judd, Sadler, & Jenkins, 2002; Ko, Judd, & Blair, 2006). Feature-based stereotyping research shows that stereotyping results not only from categorization but also from features or cues that are more subtle and vary within each category. For example a series of studies has demonstrated that listeners can detect variance in the femininity of both male and female voices and they spontaneously make gender-stereotypic inferences on this basis (Ko et al., 2006). It was shown that gender-signaling vocal cues, which people use to make gender categorization judgments, lead not only to between-category but also to within-category gender stereotyping: Participants spontaneously associated more feminine-sounding voices with more female-stereotypic characteristics both for male and female voices. This approach seems to be quite close to ours as it is looking at the continuum, not only two poles of one dimension. However, most of the studies in this line of research have addressed gender stereotyping (for a review, see Sczesny & Ko, 2008). This creates not only a topic difference but also a content and approach difference. In feature-based stereotyping studies a categorization is already given (i.e., male/female) and some features of the target are making this clear-cut distinction less definite. For example, a male with a more feminine voice seems to be more feminine than other male with a more masculine voice. In our case there is no a priori given category. In case of our research, a Turkish-looking person speaking standard German is neither clearly Turkish, nor clearly German. Participants asked to categorize the target must arrive themselves at some conclusion choosing which type of cue, accent or appearance, is for them more diagnostic of ethnicity.

## **1.5 Contrasting Appearance and Accent in Person Perception and Economic Decisions**

Participants in many experiments, including ours, categorize and evaluate others based only on a short impression of them. Although some might say that the stimuli should be richer, this approach is legitimate as research has shown that forming first impres-

sions of others can indeed occur quickly and based on little information. As the *thin slices methodology* shows, based on only short and concise samples of behavior people can form fairly accurate, strong and stable judgments of others (for a review, see Ambady, Bernieri, & Richeson, 2000).

Also in real life when people first meet, they immediately categorize one another on such characteristics as gender, age, or ethnicity. At the same time they begin to make inferences about personality traits, attributes such as likeability or credibility, as well as social, political or religious attitudes of an encountered person. They do this on the basis of different cues, among those the person's physical appearance and voice. While in sociolinguistics many studies have shown how accent and other features of speech can strongly influence impressions of the speaker (e.g., Giles & Coupland, 1991), the vast majority of studies in psychology have used appearance as a cue for forming impressions of people (cf. Rice & Mullen, 2003).

Although there is a long tradition in the impression formation literature that has examined how people integrate different pieces of information about a person, these studies have not examined appearance and voice cues (e.g., for information integration theory, see Anderson, 1971). Regarding ethnic cues, studies using different features for indicating ethnic background of a target person have most often used ethnic labels, names, and pictures of faces. Economists have extensively used names (e.g., Bertrand & Mullainathan, 2004; Carlsson & Rooth, 2007; Fershtman & Gneezy, 2001; Kaas & Manger, 2012), and psychologists names, labels, and photographs of faces (see, Rice & Mullen, 2003; Rule & Ambady, 2010). In contrast, in research on language and accent attitudes, visual information has not been included (Gluszek & Dovidio, 2010).

To the best of our knowledge, only a few studies have explicitly combined and contrasted the role of appearance and accents in evaluations of others. A few studies used speech style and information about race without the goal of comparing them, but found that speech style and accent often played a more important role in evaluating perceived cultural similarity (McKirnan, Smith, & Hamayan, 1983), general evaluations of Black and White targets (Jussim,

Coleman, & Lerch, 1987), and eyewitness favorability (Frumkin, 2007).

Among the few studies aiming at contrasting the role of appearance and accent, the earliest one examined the evaluations of majority group members, New Zealanders of European descent, towards minority group members, native New Zealanders (Holmes, Murachver, & Bayard, 2001). Results showed that participants used both accent and appearance information in their evaluations. The effects of accent and appearance were additive: Speakers who had a minority appearance and spoke with a minority accent were evaluated as lowest on socioeconomic status variables, whereas speakers who had a majority appearance and accent were evaluated highest. However, subsequent research pitting appearance against accent did not find an additive pattern, but rather that accent is a more important cue than appearance. For example, Rakić, Steffens, and Mummendey (2011a) showed that accent could be a stronger cue for categorization than appearance. In their experiments the authors implemented the *Who said what?* paradigm (Taylor, Fiske, Etcoff, & Ruderman, 1978). This paradigm indirectly assesses the social categorization of targets by comparing the number of within- and between-category errors. In one of their experiments, Rakić and colleagues combined visual and auditory stimuli appearing German versus Italian. Such a combination allowed for the direct comparison of visual and auditory cues. Participants made significantly more within-accent errors than within-look errors, indicating that they relied more on accent cues for categorizing targets.

Although the topic of language and accent has not been extensively studied in economics (for exceptions, see Hellerstein & Neumark, 2003; Lang, 1986, 1993), it is relevant also for this discipline as perception of others can influence employment, educational, housing, and other economic-related decisions. A recent accent discrimination laboratory experiment conducted in Sweden shows that there is an interest in accents also in economics (Rödin & Özcan, 2011). In the study Swedish students had to guess performance, on a general knowledge test, of other students based on their appearance and accents. Based on appearance the authors found a within-gender

discrimination against foreign-looking people. Male Swedish students estimated that male Turkish-looking students performed worse than male Swedish-looking students, and this was similar for females. However, when the target students could not only be seen but were also heard, the differential evaluation based on appearance disappeared and was replaced by accent-based discrimination. The results showed that Swedish-accented students were assumed to perform better than Turkish-accented students, regardless of their appearance, which is consistent with the results reported by Rakić and colleagues (2011). Furthermore, the negative beliefs associated with accented speech did not correspond to the actual test performance of the target students, showing error discrimination. Regrettably, to the best of our knowledge, this is the only economic laboratory experiment that (deliberately) included participants with accents and the only economic study in general, which contrasted auditory and visual cues of ethnicity.

Ethnic discrimination based only on accents was studied by researchers from different disciplines in field experiments on the rental housing market (e.g., Massey & Lundy, 2001; Purnell, Idsardi, & Baugh, 1999; Zhao, Ondrich, & Yinger, 2006; Zick, Wagner, van Dick, & Petzel, 2001). A recent German study combined two ethnicity cues, accent and name, with an employment status information (Horr, Hunkler, & Kroneberg, 2010). Using a telephone audit method in the metropolitan area of Mannheim the authors did not find a significant discrimination against callers with Turkish names in invitations for apartment viewings. However, callers with both a Turkish name and a Turkish accent were invited significantly less often. While information about having a job partly compensated for a Turkish accent disadvantage, the invitation rate for Turkish-accented speakers with a job was still significantly lower than the rate for Turkish-named speakers without an accent who did not signal a stable income. The change due to job signal may suggest that the discrimination was a statistical discrimination, but as it was not reduced completely, taste-based discrimination seems to also play a role here. Similarly as in the case of the Swedish study, the influence of accent was very strong. Accent-based discrimination seems to be an important reason

why immigrants seem to be less knowledgeable and receive fewer invitations to see and rent apartments.

## 1.6 Expectancy Violations

As shown by the studies in the previous section, accent and appearance are strong social cues. When people get in contact with someone new, this person's accent is sometimes revealed at the same moment as appearance, but often it is perceived earlier or later than his or her appearance. If we call someone before meeting, we will first make an impression of this person based on his or her voice. If we meet each other face to face, often we have a moment to observe a person before we hear the person speak.

Accent as well as appearance can induce expectations<sup>1</sup> about others' traits and behavior. For example, in Germany a Turkish-looking person approaching us can be expected to speak with a Turkish accent. Conversely, after hearing on the phone someone speaking standard German, one would not expect the person to look Turkish. The surprise when the expectations coming from one piece of information are not confirmed by the other piece might lead to very positive, in case of positive surprise, or negative evaluations of such a person. The claim about a contrasting role of expectancy-violating information is a central tenet of expectancy violation theory (EVT; e.g., Biernat, 2005; Roese & Sherman, 2007). Research studying this phenomenon showed that when information about targets violated stereotype-based expectations of them, their evaluations were extreme and went in the direction of the violation. For example, effects of negative expectancy violations were exhibited by White participants in the United States who were paired in a game with low-performing White partners as compared to low-performing Black partners (Biernat, Vescio, & Billings, 1999). Because one would expect Whites to perform well but would not have such expectations re-

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<sup>1</sup> Some authors distinguish between the terms *expectancies* and *expectations* but it is more common to treat them as equivalents (Burgoon & Burgoon, 2001). We will use both terms; we try to use expectations as this term is more common in general, but when relating to the *expectancy violation theory* or to *expectancy-violating* information, we use the term *expectancies* as it is more established in these phrases.



garding Blacks, expectancy-violating low-performing Whites were evaluated worse than expectancy-confirming low-performing Blacks.

## **1.7 Outline of the Dissertation**

The main aim of this dissertation is to examine how surprising and non-surprising combinations of how people look and with what accent they speak influence how these people are categorized and how competent and hireable they are perceived. We examined the effects of standard, foreign, and native regional accents. Besides of showing how accent discrimination is pervasive, we aimed at finding a way to prevent this discrimination. We realized these aims in three lines of research which we present in the current dissertation.

First, in Chapter 2 we investigate how majority group members categorize and evaluate others whose appearance and accent are surprising because they suggest different ethnic backgrounds of the persons being evaluated. In a series of three experiments we presented native Germans with photographs of German- and Turkish-looking targets who spoke standard German or German with a Turkish accent. We analyzed effects of appearance and accent when both pieces of information were presented simultaneously (Experiment 1), when appearance was available first (Experiment 2a), and when accents were available first (Experiment 2b).

After analyzing the effects of foreign and native appearance and accents, in Chapter 3 we present the effects of a nonstandard but native accent on evaluations of German- and Turkish-looking people. In this line of research we were interested not only in the combination of how target persons looked and spoke, but also in the evaluators' accent. Therefore, we used a regional dialect accent and we conducted our study on a diverse sample, in which many of the participants spoke a dialect themselves.

Finally, we wanted to find a way to reduce biased evaluations towards accented speakers. In Chapter 4 we present an intervention preventing such bias. As we were concerned about demand effects, we designed an unobtrusive intervention which aimed at changing participants' perceptions of accented speakers without being perceived to be a part of the experiment.

In a final discussion in Chapter 5, we summarize and interpret the results of all studies, discuss their relevance for psychology and economics, compare results on subjective and more objective measures, and describe a planned economic experiment. We also consider some of the advantages and shortcomings of the studies and propose future directions for the research on appearance and accents.

## **2 Expectancy Violations and the Interplay of Accent and Appearance in Impression Formation**

Due to global migration, native and nonnative speakers of a given language interact in many everyday situations. Depending on a host of various factors (e.g., Scovel, 2006), some immigrants and people with an immigrant background speak with a foreign accent but some speak with the native accent. Nevertheless, native speakers may expect that a foreign-looking person also speaks with a foreign accent (Cheryan & Monin, 2005). Similarly, one may be surprised to hear someone who looks like a native speaker to speak with a foreign accent. In everyday life, people often have such expectations in situations where only appearance or accent is available initially, for example when only seeing a person or talking with someone on the phone without knowing how the person looks like.

The present chapter examines the influence of people's appearance and accents and their interplay on impression formation. In three experiments, we study the influence of auditory and visual cues in situations where both are available either simultaneously or sequentially. More generally, we propose a more comprehensive approach to the expectancy violation theory. We suggest treating and measuring expectancy violations as a dynamic process with relative differences between what was expected and how the impression changed in the face of a new piece of information. This approach allows obtaining stronger evidence for the expectancy violation theory and detecting better rises or drops in evaluations which can have potentially important social consequences.

### **2.1 Accent, Appearance, and Expectations**

Physical appearance (Dion, Berscheid, & Walster, 1972) and voice (Zuckerman & Driver, 1989) are influential cues in impression formation. Both are rather stable characteristics and are difficult to change. One very powerful vocal cue is accent. The influence of ac-

cents on impression formation has been studied in the fields of sociolinguistics, second language acquisition, and social psychology for decades (Giles & Coupland, 1991; Shepard et al., 2001), but accents have not received nearly the same attention in the literature as race and ethnicity have (Gluszek & Dovidio, 2010). Researchers have shown, for example, that people who speak a nonstandard language are perceived as being less intelligent and of lower social status (e.g., Giles & Powesland, 1975). An accent can be a cue that the speaker belongs to a different social group, making relevant attitudes and stereotypes salient and influencing the impression of the speaker (Ryan, 1983).

As described in the Introduction, it appears that accent is a powerful cue for categorizing and evaluating people. What is not yet well understood is the process of forming impressions of people whose appearance suggests either a different or the same ethnic group as the accent. For example, how do people evaluate others whose appearance and accents are incongruent (e.g., Turkish appearance/German accent) and thus violate initial expectations? Moreover, how is this process different from the one for people who confirm evaluator's expectations (e.g., Turkish appearance/Turkish accent)? Accordingly, the goal of the present research was to examine the combined effects of appearance and accents on evaluation of expectancy-confirming and expectancy-violating targets.

Our hypotheses were grounded in the expectancy violation theory (EVT), which is investigated in both communication research (e.g., Burgoon & Burgoon, 2001; Burgoon & LePoire, 1993) and psychology (e.g., Jussim et al., 1987; Roese & Sherman, 2007). Its main tenet postulates that violations of expectations produce more extreme outcomes than situations that match those expectations. For example, if one had expected a conversation to be unpleasant, but it turned out to be pleasant, one would perceive it as even more pleasant than if one had already expected it to be pleasant from the beginning (Burgoon, 1993).

Regardless whether the final impression is positive or negative, expectancy violations cause arousal and distraction. Some researchers argue that, in general, first affective reactions to the discon-

firmation of expectations are negative, regardless of the direction of the violation (Olson, Roese, & Zanna, 1996). For example, research has demonstrated that people who interact with stereotype-violating partners, exhibit threat responses, and perform worse cognitively (Mendes, Blascovich, Hunter, Lickel, & Jost, 2007, pp. 714-715). Nevertheless, subsequent affective reactions may be positive if the disconfirmation is seen as a positive violation (Burgoon & LePoire, 1993). For example, Blacks with strong academic qualifications were evaluated as more competent than Whites with similar credentials, which represented positive violations of expectations based on the stereotype that Blacks are less academically-oriented (Jackson, Sullivan, & Hodge, 1993). Conversely, Whites who spoke nonstandard English were viewed more negatively than Blacks who did, representing negative expectancy violations (Jussim et al., 1987).

## **2.2 Present Research**

People's expectations based on appearance can be confirmed or violated as soon as they hear others speak. Therefore, considering both accents and appearance may provide a more complete picture of social encounters. There were several goals of the current research. The first goal was to examine whether people's evaluations of others rely more on accent or appearance. The second goal was to apply a "traditional" approach to expectancy violations and examine whether incongruent targets (e.g., Turkish-looking but speaking with a standard German accent) violate participants' expectations and are evaluated more extremely than congruent targets. We expected that targets positively violating participants' negative expectations would be evaluated more positively than targets merely confirming these positive expectations, and, conversely, targets negatively violating participants' positive expectations would be evaluated more negatively than targets merely confirming these negative expectations. The third and most important goal of the current research was to contribute to the expectancy violation theory by developing a new conceptual and methodological approach to expectations and effects of their violations. We propose to assess initial evaluations and evaluations after an expectancy-violating piece of information was pre-

sented in order to better understand whether a certain evaluation is an effect of an expectancy violation or not.

Based on the ethnolinguistic identity theory (Giles & Johnson, 1981, 1987) and on previous research (e.g., Kinzler et al., 2009; Rakić et al., 2011a), we predicted that overall accents would influence evaluations more than appearance. We examined the role of visual and auditory information on people's evaluations when both types of information were presented simultaneously and sequentially. Furthermore, we were especially interested in exploring processes related to expectancy violations, both positive and negative, when both types of information were either congruent (e.g., Turkish appearance/Turkish accent) or incongruent (e.g., Turkish appearance/German accent). We were also interested in identifying the basis for the expectations, whether people use appearance or accent.

Research has shown that the sight is the dominant sense in humans and more attention is dedicated to visual rather than auditory perception (Eysenck & Keane, 2000; Parkin, 2000). Therefore, we hypothesized that people would automatically rely on appearance at first and base their expectations about others on appearance rather than accent. However, as discussed earlier, language and accent are also strong social cues and when pitted against appearance they can override the impression based on appearance. Thus, when targets' accents contrasted their appearance, we predicted that an incongruent accent would violate expectations based on appearance.

In order to measure to what extent an impression has changed in the face of expectancy-violating information, one needs to assess the initial evaluations. To the best of our knowledge, this approach has not been examined within expectancy violation research. Specifically, researchers either evoked expectations in participants or presumed participants' expectations, but expectations or expectancy violations were not measured. Although some studies assessed feelings of expectancy violations through self-reports (e.g., Biernat et al., 1999), a more unambiguous approach to assess the effects of expectancy violations would measure the change between baseline and final evaluations.

We propose a new conceptual framework and methodological approach to the expectancy violation theory. In addition to extending past categorization findings (Rakić et al., 2011a) to evaluations, we also propose treating expectancy violations as a difference between what was expected and how the impression has changed in the face of a new piece of information. In this conceptualization we shift the point of comparison: Instead of comparing unexpected events or surprising people to expectancy-confirming events or people, we compare baseline expectations to evaluations of the same targets after the presentation of potentially expectancy-violating information. As a reflection of this concept, we suggest a methodological approach to measure expectancy violations more directly by collecting baseline evaluations and their changes for each target.

### 2.3 Overview of the Experiments

We conducted three computer-based experiments to investigate the combined effects of appearance and accent on impression formation. We chose Germans and Turks as targets. Turks are the largest immigrant group in Germany (Federal Ministry of the Interior, 2007), and are stereotypically perceived as low in competence (Asbrock, 2010; Eckes, 2002). Therefore, we expected that German participants would have low expectations about Turkish-looking and Turkish-accented people in terms of their competence. We used only male targets because differences in perceiving males and females are well-documented (e.g., Harper & Schoeman, 2003; O'Connell & Rotter, 1979) and because for many Germans a prototype of a Turkish person living in Germany is a young man (e.g., Klingst & Drieschner, 2005).

We used photographs of targets and recordings of speech in congruent or incongruent combinations and asked participants to evaluate targets' competence. We refer to *congruent combination* or *congruent target* whenever both types of stimuli, a photograph and a recording, indicate the same ethnic group, for example, a picture of a German-looking person presented with a voice speaking standard German. *Incongruent combination* or target indicates that the two

stimuli represented different groups, for example, a picture of a Turkish-looking person and a voice speaking standard German.

In the first experiment we used a traditional approach to expectancy violations and presented the basis-for-expectations and expectancy-violating cues together. We hypothesized that incongruent targets would violate participants' expectations and thus, as expectancy violation theory predicts, they would be evaluated more favorably in case of a positive violation (Turkish appearance/German accent) and less favorably in case of a negative violation (German appearance/Turkish accent) than corresponding targets that do not violate expectations (Turkish appearance/Turkish accent and German appearance/German accent, respectively). Specifically, we predicted that Turkish-looking targets speaking with a German accent would be evaluated most positively among all targets whereas German-looking targets speaking with a Turkish accent would be evaluated most negatively. Furthermore, we included a categorization task for all participants to check if incongruent targets were unexpected, violated participants' expectations and were thus categorized slower than congruent targets. With the categorization task we also wanted to check if the results replicate the stronger effect of accent than appearance on social categorization (Rakić et al., 2011a).

Furthermore, we examined the importance of the order in which visual and auditory cues were presented. Specifically, we assessed evaluations of targets when their appearance and accent were presented simultaneously, when the visual cue was presented first, followed by an auditory cue, and when the auditory cue was first, followed by a visual cue. As noted earlier, in Experiment 1 participants evaluated congruent and incongruent targets, whose appearance and voice were presented simultaneously. However, when both auditory and visual information are presented at the same time, the results might be due to different baseline evaluations for different targets, not expectancy violations. Specifically, similar evaluations may be interpreted as a lack of expectancy violations. For example, without knowing whether participants (as researchers would predict) initially expect German-looking people to be more competent than Turkish-looking people, when both people speak with a Turkish



accent and are evaluated similarly, it is unclear whether the German-looking person's Turkish accent violated expectations or the expectations were similar for both targets. When having only final evaluations one cannot separate effects caused by different baselines from changes due to expectancy violations. Thus, in Experiments 2a and 2b participants gave their evaluations twice. First, participants rated targets after being presented with only one piece of information (visual or auditory) to assess the baseline evaluations. Then, both pieces of information were presented and participants rated the targets again. The significant difference between the first and second evaluations would represent changes that the added information produced and an effect of potential expectancy violation. As a consequence of using a new approach in Experiment 2a and 2b our hypotheses were also formulated differently. For example, we predicted that a German-looking Turkish-accented target will negatively violate participants' expectations. However, instead of stating that he will be evaluated *the worse* of all targets, we expected that after presenting his accent his evaluations will *decrease* relative to how he was evaluated based only on his appearance. Furthermore, by using this method we were able not only to detect expectancy violations better, but also to measure their relative size.

## 2.4 Experiment 1

The first aim of Experiment 1 was to replicate earlier results showing that accent is a strong cue for social categorization and evaluations. The second aim was to examine whether incongruent targets would violate participants' expectations and be evaluated more extremely than congruent targets when accent and appearance are available almost at the same time.

Based on the ethnolinguistic identity theory (ELIT), we predicted that accent would play a more important role than appearance in the evaluation of targets. Specifically, targets speaking standard German would be evaluated more positively than those speaking with a Turkish accent. Based on the expectancy violation theory (EVT), we predicted that incongruent targets would violate participants' expectations leading to more extreme positive and negative

evaluations. Integrating predictions from ELIT, EVT, and findings on the reliance on sight over hearing in humans, we predicted that appearance would be the basis for forming expectations and accent, as a socially strong cue, would violate those expectations. Particularly, we hypothesized that when participants see a Turkish-looking person speaking standard German, their negative expectations based on the appearance would be positively violated by the accent and they would evaluate the target most favorably. Conversely, we expected that German-looking targets speaking with a Turkish accent would negatively violate participants' expectations, and therefore be evaluated least favorably.

## 2.4.1 Method

### 2.4.1.1 Participants

Participants were 226 undergraduate students of various faculties (economics, management, psychology, and others) of a big German university. After excluding data of 11 participants who were not native German speakers, the final sample consisted of 215 participants (72 men,  $M_{\text{age}} = 22.33$ ,  $SD = 3.24$ ). They were compensated with either €1 and a chocolate bar or partial course credit.

### 2.4.1.2 Experimental design

The experiment had a 2 (appearance: German vs. Turkish)  $\times$  2 (accent: standard German vs. German with a Turkish accent) within-subject design. Thus, there were four target types: German appearance/German accent (congruent), Turkish appearance/Turkish accent (congruent), German appearance/Turkish accent (incongruent), and Turkish appearance/German accent (incongruent). Stimulus composition was counterbalanced by using two versions of the experiment: Any given voice (e.g., speaking standard German) was matched with a congruent picture (German-looking person) in one version of the experiment and with an incongruent picture (Turkish-looking person) in the other version. All participants first saw two "filler" congruent German targets for training purposes and to set a common base for evaluations. Then, the main targets were presented in ran-

dom order. The targets' faces and voices were presented with one second in between. The order of presentation was counterbalanced between participants: Half of the participants first saw the face of a target and one second later heard his voice whereas the other half first heard the voice and one second later saw the corresponding face.

#### 2.4.1.3 Procedure, materials, and measures

After being welcomed by an experimenter unaware of the study's hypotheses, participants were seated in front of a computer screen and asked to sign the informed consent form. The experiment consisted of two main blocks: the evaluation and categorization tasks, with the same targets in each. First, the context of the situation was described. Participants were asked to imagine that either they were helping in a recruitment process for a *middle level manager* position at their workplace or that they had a free room for rent in their apartment. For all targets, participants were asked to look at the photo of a face and to listen to a voice and evaluate the person. Each face was shown for five seconds and voice samples were three seconds long; there was a one second pause between each face and voice (with order counterbalanced). All stimuli were earlier carefully selected and pre-tested (for details see Appendix A). After the visual and auditory introduction of each target, participants were asked to evaluate his competence. As the main dependent measure, we used a short version of the competence scale (e.g., Asbrock, 2010; Fiske, Cuddy, Glick, & Xu, 2002) with three items competent, competitive, and independent ( $\alpha = .93$ ) rated on a 7-point scale ranging from 1 – *not at all* to 7 – *very much*. After each target, a manipulation check was included to verify that the accent was perceived as intended (no accent for standard German, a moderately strong one for Turkish accented speakers). After this task was completed for all targets, participants saw and heard the same targets again and were asked to categorize them as Germans or non-Germans as quickly as possible. In the categorization task participants answered the question "Is this person German?" with *yes* and *no* as possible answers; reaction times of these responses were collected. We added female targets and

questions about gender of the target as filler items in order to prevent mental preparation to responding always to the same question, which could lead to obtaining falsely short reaction times. At the end, participants answered a few demographic questions, filled out a short version of the German scale of motivation to respond without prejudice (Banse & Gawronski, 2003; Dunton & Fazio, 1997), provided their e-mail address for debriefing, were given their reward, thanked, and dismissed.

## 2.4.2 Results

### 2.4.2.1 Preliminary analyses

Distributional assumptions of parametrical statistical tests were tested and not violated in any of the experiments reported in this dissertation. A type-I-error level of  $p < .05$  was adopted for all statistical tests. In order to check if there were differences in mean competence evaluations between the two contexts, we conducted a 2 (appearance: German vs. Turkish)  $\times$  2 (accent: German vs. Turkish)  $\times$  2 (context: students' apartment vs. job interview) mixed analysis of variance (ANOVA). There was no difference in evaluations between the two contexts and no interaction effects involving context (all  $F_s < 1$ ). Therefore, data for two contexts were collapsed.

In order to test differences in competence judgments between the two stimulus presentation sequences, we conducted a 2 (appearance: German vs. Turkish)  $\times$  2 (accent: German vs. Turkish)  $\times$  2 (sequence: appearance then accent vs. accent then appearance) mixed ANOVA. There was no significant difference between the two sequences,  $F(1,197) = 1.13$ ,  $p = .29$ ,  $\eta_p^2 = .01$ , so the data were merged.

Motivation to respond without prejudice did not significantly influence evaluations,  $B = .05$ , Wald's  $\chi^2 = 1.17$ ,  $p = .28$ , which was checked in a regression for repeated measures using the Generalized Estimating Equations (GEE) method, and will thus be disregarded. Manipulation check proved that the targets speaking standard German were indeed perceived as having no accent ( $M = 1.22$ ,  $SD = 0.42$ ) and those speaking with a Turkish accent were perceived as speak-

ing with a moderately strong one ( $M = 4.79$ ,  $SD = 1.01$ ),  $t(197) = -49.79$ ,  $p < .001$ .

#### 2.4.2.2 Social categorization

At the end of the experiment participants were asked to categorize targets as Germans or non-Germans. As can be seen in Figure 2, targets were categorized more according to their accent than to their appearance.

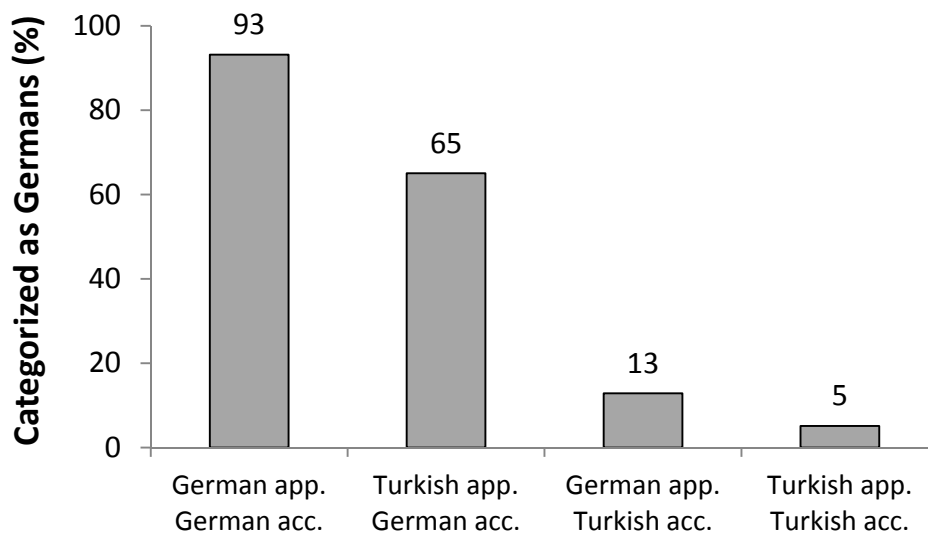


Figure 2. Percent of targets categorized as Germans or non-Germans by target type (German appearance/German accent, Turkish appearance/German accent, German appearance/Turkish accent, Turkish appearance/Turkish accent).

We tested this observation by means of a binomial logistic regression for repeated measures using the GEE method. The results are presented in Table 1. As the Wald statistic shows, accent was a significant and strong predictor of categorization, the influence of appearance was much weaker, and there was an interaction effect of appearance and accent. Follow-up analyses of the interaction showed that targets who appeared German were more often categorized as Germans than those who appeared Turkish, and this effect was de-

scriptively stronger for targets who spoke standard German, McNemar's  $\chi^2 = 50.21$ ,  $p < .001$ , than for those who spoke with a Turkish accent, McNemar's  $\chi^2 = 10.62$ ,  $p = .001$ , which could be due to a floor effect for Turkish-accented targets.

Table 1

*Logistic Regression Results for Accent and Appearance Predicting Categorization of Targets.*

	<i>B</i>	<i>B(SE)</i>	95% CI	Wald	<i>df</i>	<i>p</i>
Intercept	-2.64	0.20	[-3.03, -2.24]	173.66	1	< .001
Accent	4.54	0.24	[4.06, 5.02]	349.35	1	< .001
Appearance	2.00	0.23	[1.55, 2.44]	77.25	1	< .001
Accent*App.	-0.98	0.33	[-1.64, -0.33]	8.65	1	.003

The results fully confirmed the hypothesis that targets speaking standard German would be more often categorized as Germans than those speaking with a Turkish accent. The results replicated earlier findings using different paradigm and showed that accent is a strong cue for the ethnic categorization of people.

#### 2.4.2.3 Reaction times

We checked whether incongruent targets were surprising and more difficult to categorize by analyzing categorization reaction times. We first excluded responses that were  $\pm 3$  standard deviations from the mean. There were no significant differences in categorization times between congruent German targets and congruent Turkish targets,  $t < 1$  or between the two incongruent target types,  $t < 1$ . Therefore, we present the results comparing reaction times for congruent versus incongruent targets. A dependent samples t-test showed that the mean reaction time for categorizing incongruent targets was longer ( $M = 1347.28$  ms,  $SD = 539.57$  ms) than for congruent targets ( $M = 1250.58$  ms,  $SD = 432.98$  ms),  $t(197) = -2.67$ ,  $p = .008$ . Having confirmed that categorization relied more on accent than appearance and that incongruent stimuli were expectancy-violating and difficult to categorize, we analyzed the effects of appearance and accent on evaluations.

#### 2.4.2.4 Main analysis: Competence impressions

To examine influence of accent and appearance on evaluations, we conducted a 2 (appearance: German vs. Turkish)  $\times$  2 (accent: German vs. Turkish) repeated measures ANOVA. Results showed that in line with the hypothesis, regardless of their appearance, targets speaking standard German were evaluated as more competent ( $M = 4.83$ ,  $SD = 0.75$ ) than those who spoke with a Turkish accent ( $M = 4.20$ ,  $SD = 0.84$ ),  $F(1,197) = 85.74$ ,  $p < .001$ ,  $\eta_p^2 = .30$  (see Figure 3). Competence evaluations also depended on appearance, but to a smaller extent than on accent,  $F(1,197) = 6.21$ ,  $p = .01$ ,  $\eta_p^2 = .03$ , confirming the hypothesis of the strong role of accent in forming impressions. More importantly, evaluations depended on specific combinations of accent and appearance, which was shown by an interaction effect,  $F(1,197) = 20.63$ ,  $p < .001$ ,  $\eta_p^2 = .10$ . To examine whether incongruent targets were evaluated more extremely than congruent targets, we conducted analyses of simple main effects, which showed that among targets who spoke standard German, those who appeared Turkish were perceived as more competent than those who appeared German,  $F(1,197) = 21.30$ ,  $p < .001$ ,  $\eta_p^2 = .10$ , confirming the hypothesis of positively violated expectations<sup>2</sup>. However, among Turkish-accented targets those who appeared German were not evaluated as significantly less competent than those who appeared Turkish,  $F(1,197) = 2.47$ ,  $p = .12$ ,  $\eta_p^2 = .01$ . The results confirm our predictions in regard to positive, but not to negative violations.

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<sup>2</sup> Differences in evaluations of targets who spoke standard German but looked Turkish or German were caused by their different appearance, not by different categorization of them. If we combine the evaluation results with the results of categorization, we see that Germans (i.e., those who spoke standard German) who looked Turkish were evaluated better than Germans who looked German. To check if this difference could be caused by those 35% of participants who categorized targets who spoke standard German but looked Turkish as non-Germans, we conducted two t-tests comparing evaluations of the same two targets depending on their categorization as German or not. Results showed no significant differences (both  $t_s < 1.7$ ,  $p_s > .10$ ) indicating that the different evaluations were indeed due to different looks of standard German speaking targets and not due to different categorization of them.

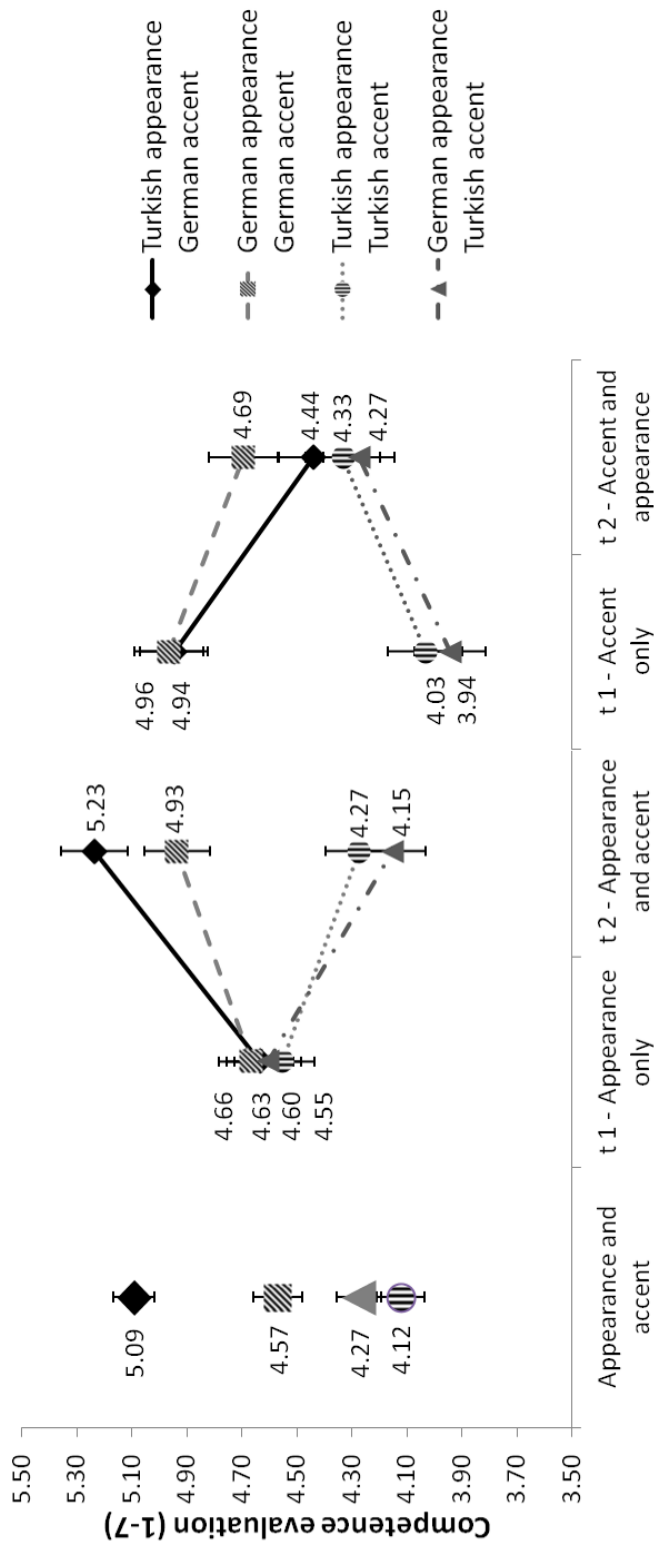


Figure 3. Mean evaluations of competence by target type in Experiment 1 (left) where faces and voices were presented together, in Experiment 2a (middle) where faces were presented first (t1) and voices were added (t2), and in Experiment 2b (right) where voices were presented first (t1) and faces were added (t2). Error bars represent standard errors of the mean.



### 2.4.3 Discussion

Results of Experiment 1 showed that the competence evaluation of targets depended on the combination of their appearance and accents. Moreover, targets were categorized and evaluated more according to their accent than according to their appearance, confirming our hypotheses and replicating past research showing that accents are important cues in social cognition.

Furthermore, Turkish-accented speakers were overall evaluated as less competent than standard German speakers. However, Turkish-looking targets who spoke standard German were perceived as most competent, in accordance with the hypothesis of positively violated expectations. This result also supports our hypothesis that participants would form their expectations based on appearance, and accents would either confirm or violate those expectations. If participants based their expectations on accent, then the targets speaking standard German (positive expectations) but appearing Turkish (negative violations) would have been evaluated least favorably.

Turkish-looking targets speaking standard German were perceived as the most competent and at the same time German-looking targets who spoke with a Turkish accent were, together with congruent Turkish targets, evaluated as the least competent. German-looking targets with a Turkish accent were not evaluated less favorably than congruent Turkish targets. However, categorization results indicated that both types of incongruent targets violated participants' expectations. Based on previous findings, the expected evaluation of congruent Turkish targets would be lower than that of congruent German targets (Asbrock, 2010). Therefore, a similar evaluation of congruent Turkish targets and German-looking targets who spoke with a Turkish accent is itself an indicator of a negative expectancy violation.

One limitation of the Experiment 1, common among experiments on expectancy violations, is that we compared evaluations of different types of targets, but we neither directly assessed participants' expectations nor measured baseline evaluations. We did measure categorization and reaction times of categorization, which allowed us to infer that incongruent targets were expectancy-

violating, but we could not determine how high or low participants' expectations were. Furthermore, reaction time data is impossible to collect in some experimental settings, so it would be useful to be able to draw inferences about expectations without such data. We addressed these limitations in the subsequent experiments.

## **2.5 Experiment 2a: Seeing People before Hearing them Speak**

Experiment 2a and 2b had three aims. First, we sought to replicate the finding that accent strongly influences evaluations. Second, in both experiments, we assessed participants' interpretations of the reasons *why* some Turkish-looking people spoke standard German or some German-looking people spoke with a Turkish accent. Third, and most importantly, we examined how the effects of expectancy violations occur. Although in Experiment 1 we presumed that incongruent targets violated participants' expectations and the results on the categorization task supported our hypotheses, we did not directly assess the baseline evaluations of appearance and accent. Therefore, in Experiments 2a and 2b we employed a repeated measurement design. First, participants were presented with only one type of information about the target (visual in Experiment 2a and auditory in Experiment 2b) and asked for evaluations. Afterwards, the second piece of information was added (auditory in Experiment 2a and visual in Experiment 2b) and participants were asked to evaluate targets again. This procedure allowed us to test if and how the evaluations changed.

In Experiment 2a we expected both positive and negative expectancy violations. In other words, we expected the addition of German accent information to increase ratings and of Turkish accent to decrease them. We hypothesized that competence evaluations of a Turkish-looking target based only on his appearance would be lower than those of the same target with a standard German accent. Such a pattern would suggest that the German accent induced a positive expectancy violation. Conversely, due to negative expectancy violations, we expected a decrease in evaluations of a German-looking

target when a Turkish-accented voice would be added. Finally, we expected that small changes could occur also for congruent targets, but they would be smaller than for incongruent targets.

## 2.5.1 Method

### 2.5.1.1 Participants

Participants were 63 undergraduate students from the same university. After excluding three participants who were not native German speakers, the final sample consisted of 60 participants (19 men,  $M_{\text{age}} = 23.32$ ,  $SD = 4.50$ ). Participants were compensated with either €2 and a chocolate bar or partial course credit.

### 2.5.1.2 Procedure, materials, and measures

We used the job interview context from Experiment 1 and the same competence scale ( $\alpha_{\text{Time 1}} = .84$ ,  $\alpha_{\text{Time 2}} = .91$ ). Participants also indicated whether they would hire each candidate, giving their answers on a scale ranging from 1 – *certainly not* to 7 – *certainly yes*, and what salary (between 2000€ and 4000€/month) he should be offered. The experiment consisted of two evaluation blocks with eight targets in each. The first block included evaluations of four typical German and four typical Turkish faces. The stimuli used were different from the ones in Experiment 1, but were pre-tested and selected the same way (see Appendix A). After instructions explaining the context of the recruitment process, participants were asked to imagine they received resumes of several job candidates. For each of the eight targets, participants were instructed to look at the photo and to evaluate the person on competence traits. In the second block, participants were asked to imagine that the people they just saw came to the interview and now they would also hear them speak. Participants were instructed to evaluate the same targets again, but this time, one second after seeing an already familiar face, a voice was added.

In order to elucidate participants' interpretations of the incongruent targets, after the second evaluation phase participants were asked to write how they felt and if they were surprised when a person from a photograph spoke with or without an accent. Participants

were also asked (in two separate questions) to write about their impressions and thoughts they had when confronted with two types of incongruent candidates. After demographic questions, participants provided their e-mail address for the purpose of debriefing; they were given their reward, thanked, and dismissed.

## 2.5.2 Results

### 2.5.2.1 Competence impressions

As competence, hirability, and salary ratings were highly correlated (between  $r = .43^{**}$  and  $r = .82^{**}$ ), in the subsequent analyzes we used only competence ratings. We conducted a 2 (appearance: German vs. Turkish)  $\times$  2 (accent: standard German vs. Turkish accent)  $\times$  2 (measurement point: Time 1, face vs. Time 2, face and voice) repeated measures ANOVA. Overall, targets who spoke standard German were evaluated as more competent ( $M = 4.84$ ,  $SD = 0.61$ ) than those who spoke with a Turkish accent ( $M = 4.37$ ,  $SD = 0.48$ ),  $F(1,59) = 39.33$ ,  $p < .001$ ,  $\eta_p^2 = .40$ , replicating Experiment 1 (see Figure 3). Results showed an interaction effect of accent and measurement point,  $F(1,59) = 27.34$ ,  $p < .001$ ,  $\eta_p^2 = .32$ , but also a combination of appearance and accent and their change over time influenced competence impressions, which was shown by a higher-order interaction effect of accent, appearance, and time,  $F(1,59) = 4.77$ ,  $p = .03$ ,  $\eta_p^2 = .08$ . To follow up on this interaction, we conducted separate 2  $\times$  2 ANOVAs within each measurement point. When targets could be only seen they were all evaluated similarly,  $F_s < 1$ , indicating that appearance information was not enough to distinguish between competence of German- and Turkish-looking targets. When they could be also heard, their accents influenced the evaluations and those who spoke standard German were evaluated as more competent ( $M = 5.06$ ,  $SD = 0.70$ ) than those who spoke with a Turkish accent ( $M = 4.19$ ,  $SD = 0.70$ ),  $F(1,59) = 65.84$ ,  $p < .001$ ,  $\eta_p^2 = .53$ .

To test our hypotheses about expectancy violations, we analyzed changes in competence evaluations separately for German- and Turkish-looking targets. Evaluations of Turkish-looking targets changed differently depending on the accent they spoke,  $F(1,59) =$

16.93,  $p < .001$ ,  $\eta_p^2 = .22$ . Perceived competence of Turkish-looking targets increased when they spoke standard German,  $F(1,59) = 25.70$ ,  $p < .001$ ,  $\eta_p^2 = .30$ , indicating that participants' expectations were positively violated and confirming the hypothesis of increase in evaluations in the case of positively violated expectations. This result also replicates Experiment 1. The increase in evaluations of congruent Turkish targets was not significant,  $F(1,59) = 2.69$ ,  $p = .11$ ,  $\eta_p^2 = .04$ , indicating that they did not violate participants' expectations. Competence evaluations of German-looking targets also changed depending on the accent they spoke,  $F(1,59) = 16.99$ ,  $p < .001$ ,  $\eta_p^2 = .22$ . Their evaluations decreased when they spoke with a Turkish accent,  $F(1,59) = 13.75$ ,  $p < .001$ ,  $\eta_p^2 = .19$ , indicating that participants' expectations were negatively violated, and confirming the hypothesis of decrease in evaluations in the case of negatively violated expectations. The results showed negative expectancy violations more strongly and clearly than the results of Experiment 1 did. The evaluation of congruent German targets also increased,  $F(1,59) = 5.74$ ,  $p = .02$ ,  $\eta_p^2 = .09$ , but the difference in evaluations was smaller. Evaluations of targets changed after the auditory information was added but the mean differences and effect sizes for incongruent targets (Turkish appearance/German accent,  $\Delta M = 0.60$ ,  $\eta_p^2 = .30$  and German appearance/Turkish accent,  $\Delta M = -0.45$ ,  $\eta_p^2 = .19$ ) were larger than for congruent targets (German,  $\Delta M = 0.27$ ,  $\eta_p^2 = .09$  and Turkish,  $\Delta M = -0.28$ , *n.s.*,  $\eta_p^2 = .04$ ). The results fully confirmed the hypotheses that expectancy violations would cause a change in evaluations in the direction of the valence of the added piece of information and that the change would be larger for incongruent targets.

#### 2.5.2.2 Open-ended questions

We analyzed participants' open-ended responses about their interpretations of the congruent and incongruent targets. In line with the results that job candidates with a Turkish appearance but speaking standard German were perceived as most competent, the majority (63%) of participants indicated that they were positively surprised and that the candidate made a good impression on them, appeared competent and well educated. About one third (30%) spontaneously

revealed that he was probably born or raised in Germany and he was well integrated into the German society. Some (15%) participants also inferred that the candidate must be hard working, ambitious, highly motivated and engaged in what he is doing. Several (15%) participants shared their observations that appearance was not enough to form an impression of a person and when they heard an accent-free voice they noticed that the appearance was misleading.

Elucidating why targets who appeared German but spoke with a Turkish accent were evaluated as relatively incompetent, the majority of participants (53%) wrote that they were surprised by the targets' speech. One third (34%) specified that they were astonished and irritated when they heard a voice with a foreign accent after seeing a German-looking face. They felt annoyed, indicated that they had problems with deciding on their responses and 28% stated that they perceived the candidate as less competent than what they had thought based on the face only. Over one fourth (28%) of participants wrote that the candidate was probably a foreigner born in Northern or Eastern Europe or an ethnic German repatriated from the east. Interestingly, participants did not perceive such targets as Turks with a bit lighter skin color, but rather adjusted their perception of the accent. Thus, some participants perceived a Turkish accent in combination with a German-looking face not as a Turkish but as a different accent.

### **2.5.3 Discussion**

The Experiment 2a tested a new conceptual and methodological approach to expectancy violations by measuring baseline evaluations when only a visual cue (appearance) was present and assessing changes in the evaluations when auditory cue (accent) was added. When only photographs of faces were seen, all candidates were perceived to be similarly competent. However, when the accent was added, evaluations of job candidates' competence changed dramatically. Different faces were not diagnostic enough to evoke different evaluations: Perceived competence of Turkish- and German-looking people was similar when they were presented only by means of faces. Consequently, when accented voices were added to the photo-

graphs, competence evaluations diverged. This divergence caused a rise and a drop in competence evaluations of incongruent Turkish and German targets, respectively, replicating the findings of Experiment 1 for both positive and negative expectancy violations.

Answers to the open-ended questions broadened our understanding of participants' interpretations of the incongruent targets, and such interpretations could have been underlying their subsequent judgments. The interpretations were also in line with the results of the categorization task in Experiment 1. Turkish-looking targets speaking standard German were seen to be children of immigrants, but born in Germany. Interestingly, it seems that sometimes interpretations driven by a German-looking face changed the perception of a Turkish accent, such that targets who appeared German but spoke with a Turkish accent were by some participants perceived to speak with a Northern or an Eastern European accent. This shows how surprising combinations of accent and appearance can strongly change people's perceptions.

## **2.6 Experiment 2b: Hearing People Speak before Seeing them**

Experiment 2b investigated how evaluations of people change when they are first heard and later seen. In Experiments 1 and 2a targets speaking standard German were perceived as more competent than those who spoke with a Turkish accent. Furthermore, in Experiment 2a accents allowed participants to evaluate some targets as more or as less competent than the others, while appearance did not allow for it and based on appearance all targets were perceived to be similarly competent. Thus, we expected that based on voices presented alone, participants would evaluate standard speakers as more competent than accented speakers. Appearance can also influence judgments, so we expected that seeing a target after hearing his accent could change evaluations. However, based on results of Experiment 1 and 2a we hypothesized that differences in evaluations of different targets with appearance information added would be smaller than with accent information only.

We also expected that the difference in the order of presenting targets' faces and voices between Experiment 2a and 2b would change evaluations, especially for incongruent targets. In Experiment 2a presenting first a Turkish-looking face and then a voice speaking standard German caused positive expectancy violations. In the present experiment, we hypothesized that presenting first a standard German voice and then a Turkish-looking face would be perceived as a negative expectancy violation, so that the same target whose evaluations increased in Experiment 2a, and he was perceived as most competent, would be evaluated worse and his evaluations would decrease. Conversely, adding to a Turkish-accented voice a German-looking face would evoke a positive expectancy violation and increase the ratings of competence instead of evoking a negative expectancy violation and lowering the ratings when the order was the opposite.

## 2.6.1 Method

### 2.6.1.1 Participants

Participants were 57 undergraduate students from the same university. We excluded three participants: One was not a native German speaker and two at the end of the experiment correctly indicated the experimental manipulation. The final sample consisted of 54 participants (20 men,  $M_{\text{age}} = 22.69$ ,  $SD = 3.67$ ). Participants were compensated with either €2 and a chocolate bar or partial course credit.

### 2.6.1.2 Procedure, materials, and measures

We used the same stimuli and the same experimental procedure as in Experiment 2a. The only difference was that participants first heard targets and were asked to imagine that they spoke with job candidates on the phone; then participants were asked to imagine that the candidates came to the interview and now they could be both heard and seen. The dependent measure was the three-item competence scale ( $\alpha_{\text{Time 1}} = .93$ ,  $\alpha_{\text{Time 2}} = .93$ ).



## 2.6.2 Results

### 2.6.2.1 Competence impressions

We conducted a 2 (appearance: German vs. Turkish)  $\times$  2 (accent: German vs. Turkish)  $\times$  2 (measurement point: Time 1, voice vs. Time 2, voice and face) repeated measures ANOVA. Competence evaluations again strongly depended on accents: Regardless of how targets looked, those who spoke standard German were evaluated more favorably ( $M = 4.76$ ,  $SD = 0.63$ ) than those who spoke with a Turkish accent ( $M = 4.14$ ,  $SD = 0.79$ ),  $F(1,53) = 39.04$ ,  $p < .001$ ,  $\eta_p^2 = .42$  (see Figure 3). An interaction effect of accent and time,  $F(1,53) = 30.97$ ,  $p < .001$ ,  $\eta_p^2 = .37$ , showed that, confirming our predictions, accents made participants distinguish between levels of competence of standard versus accented speakers, but appearance information made the evaluations converge and the difference between German- and Turkish-accented targets was less pronounced. Simple main effects analyses corroborated this observation showing that when only voices of targets were presented, candidates speaking standard German ( $M = 4.95$ ,  $SD = 0.75$ ) appeared much more competent than those speaking with a Turkish accent ( $M = 3.99$ ,  $SD = 0.85$ ),  $\Delta M = 0.96$ ,  $F(1,53) = 66.29$ ,  $p < .001$ ,  $\eta_p^2 = .56$ . When candidates were also seen, the difference between evaluations of German ( $M = 4.56$ ,  $SD = 0.71$ ) and Turkish-accented ( $M = 4.30$ ,  $SD = 0.88$ ) targets remained significant, but the effect was much smaller,  $\Delta M = 0.26$ ,  $F(1,53) = 5.27$ ,  $p = .03$ ,  $\eta_p^2 = .09$ . Furthermore, the evaluations of the two targets who spoke standard German decreased between the time when they could only be heard and when they could also be seen, whether they appeared German or Turkish,  $F(1,53) = 16.37$ ,  $p < .001$ ,  $\eta_p^2 = .24$ . In contrast, evaluations of the two targets who spoke with a Turkish accent increased, whether they were German- or Turkish-looking,  $F(1,53) = 11.10$ ,  $p = .002$ ,  $\eta_p^2 = .17$ . Overall, appearance as a new piece of information made participants distinguish less between levels of competence of various targets than accents did.

### 2.6.2.2 Sequence effects

It is also worthwhile to note that the same stimuli as in Experiment 2a, presented in reversed sequence, now created opposite expectancy violations. Earlier, when seen first, Turkish-looking targets with a German accent evoked positive expectancy violations and their evaluations increased. However, when heard first, they created negative expectancy violations and their evaluations decreased (together with congruent German targets). Conversely, when seen first, German-looking targets with a Turkish accent evoked negative expectancy violations and their evaluations decreased but when heard first, they created positive expectancy violations and their evaluations increased (together with congruent Turkish targets).

In order to measure this observation quantitatively, we analyzed the order effect combining data from second measurement (t2) in Experiment 2a and 2b. We are aware of the fact that these were separate studies and participants were not randomly assigned to conditions, but the two samples were drawn from the same population and did not differ demographically. A mixed 2 (appearance: German vs. Turkish)  $\times$  2 (accent: German vs. Turkish)  $\times$  2 (order: face then voice vs. voice then face) ANOVA indeed showed that two orders of presenting stimuli caused different evaluations of targets, which was demonstrated by an interaction effect of order, accent and appearance,  $F(1,112) = 2.72$ ,  $p = .05$ ,  $\eta_p^2 = .02$ . Follow up analyses showed that Turkish-looking targets who spoke standard German were evaluated better when they were seen first than when they were heard first,  $F(1,112) = 26.27$ ,  $p < .001$ ,  $\eta_p^2 = .19$ . For other targets the effects were not significant (all  $F$ s  $< 1.62$  and  $p$ s  $> .21$ ).

### 2.6.3 Discussion

In Experiment 2b we observed both positive and negative expectancy violations. However, when by design we forced participants to base their expectations on accents, evaluations changed not only for incongruent, but also for congruent targets. Only targets' accents mattered for evaluations, and the combination of how they spoke and how they looked was not important. These results show that when accents could be heard already in the beginning, knowing

later if the candidate looks Turkish or German did not matter and any appearance made the evaluations based on accents less pronounced, showing again that accents are strong and more diagnostic social cues. Furthermore, such observation was possible with a new approach to expectancy violations. Without knowing the actual expectations (i.e., baseline evaluations) we would not be able to infer expectancy violations from such results.

Moreover, with the new approach the results showed that the same faces and voices as in Experiment 2a, now presented in reversed sequence, provoked opposite expectancy violations. Comparing evaluations of targets at Time 2 in Experiments 2a and 2b, one can see that especially for Turkish-looking targets who spoke standard German the sequence, in which information about their appearance and accent were presented, strongly influenced final evaluations: They were more positively evaluated when appearance was presented first, negative expectations about them were formed, and then those expectations were positively violated by a standard accent. When the standard accent was the first piece of information presented, it set positive expectations which were later negatively violated by a Turkish appearance, causing more negative evaluations.

## **2.7 General Discussion**

The first aim of the present line of research was to examine the influence of visual (appearance) and auditory (accent) cues on impression information. The second and most important aim was to complement a traditional conceptual and methodological approach to expectancy violation theory with a new dynamic approach. We examined whether incongruent targets (e.g., Turkish-looking but speaking with a standard German accent) violate participants' expectations and receive more extreme evaluations than congruent targets (traditional approach). We also examined whether initial evaluations of targets change after adding an expectancy violating piece of information (dynamic approach). We conducted three experiments where job candidates were seen in photographs and heard in short voice recordings. The targets appeared Turkish or German and spoke

German with a standard German accent or with a Turkish accent. Participants evaluated targets' job-related competence (Experiment 1, 2a-2b) and also categorized them in terms of ethnicity (i.e., Germans or non-Germans, Experiment 1). The first finding was a stronger influence of targets' accent than appearance on participants' categorization and evaluations, which contributes to the body of research on the ethnolinguistic identity theory by indicating that language and accent are important social markers. Furthermore, results showed that incongruent targets violated participants' expectations, which led to more extremely valenced evaluations. Specifically, Turkish-looking targets who spoke with a German accent positively violated participants' negative expectations, and were evaluated as more competent than German-looking targets who spoke with a German accent. Conversely, German-looking targets who spoke with a Turkish accent negatively violated participants' positive expectations, and were evaluated similarly to Turkish-looking targets who spoke with a Turkish accent. Although there was no difference in perceived competence of the two Turkish-accented targets, baseline expectation measurements showed that evaluations of German-looking targets decreased after they spoke with a Turkish accent. This indicated that an expectancy violation indeed occurred, and supported the usefulness of our method. The findings also demonstrated that even for the same target, the presentation order of visual and auditory information may determine the valence of expectancy violations. More generally, with a new approach we obtained stronger evidence for the expectancy violation theory.

### **2.7.1 Accents and changing impressions**

The results showed a stronger role of accent than appearance in impression formation contributing not only to the ethnolinguistic identity theory and to research on accents, but also to the growing body of research contrasting visual and auditory cues in the evaluation of others. Using a different methodological paradigm, we replicated previous results that accents determine social categorization over appearance (Rakić et al., 2011a). Similar to earlier studies with children, in adults we also observed a stronger influence of accents

on judgments, reflected by a preference for standard speakers with an outgroup appearance over nonstandard speakers with an ingroup appearance (Kinzler et al., 2009).

In Experiments 2a-b the core process of changing impressions due to expectancy violations was analyzed by asking participants to give their evaluations twice: With only one piece of information (visual or auditory) present to ascertain the baseline and with the second piece added to show the difference in evaluations. The results indeed showed changes in evaluations demonstrating that first impressions were quickly modified. This seems to be in opposition to the findings on impression formation, which say that first impressions are persistent and difficult to change even in the face of subsequent contradictory information (Ambady et al., 2000; Baumeister, Bratslavsky, Finkenauer, & Vohs, 2001). However, research in this area has been typically conducted using text descriptions, silent videos, or pictures of targets. In cases where auditory information was used, visual information was typically omitted. Furthermore, in our experiments, the information in question was related to ethnicity, one of the most important social categories, and conflicting pieces of information were coming from different (visual and auditory) channels, causing re-categorization of incongruent targets and altering impressions. We also used competence evaluations and some researchers specify that first impressions about the morality of a person are very stable, but it is easier to change first impressions of abilities (Skowronski & Carlston, 1987, 1992). Taking the above considerations into account, it is unsurprising that impressions of job candidates changed. Future research should continue using both auditory and visual stimuli and explore which impressions and social categorizations are easier and which more difficult to change.

### **2.7.2 Dynamic approach to expectancy violations**

The experiments presented in the current chapter showed *changes* in impressions caused by expectancy violations. Earlier studies on expectancy violations often interpreted the results in absolute terms, in terms of mean differences between evaluations of expectancy-violating and expectancy-confirming targets. In our experiments

we followed this reasoning and method in Experiment 1, but later we looked not only at final evaluations, but also at baseline evaluations and at their changes. Therefore, we treated expectancy violations as a dynamic process with relative differences between what was expected and how the impression changed in the face of a new piece of information. The results supported the expectancy violation theory predictions and showed the advantage of looking at changes in evaluations. For instance, when a German-looking target started to speak with a Turkish accent, participants perceived him to be less competent than when he could only be seen, showing negative expectancy violation. Even though the final evaluation was only descriptively more negative than that of Turkish-looking and Turkish-accented target, the difference between the baseline and final evaluation showed that we were indeed dealing with an expectancy violation. From such an example we can see that analyzing changes yields more information about the process of expectancy violations than observing only the end effects. From the end effects we can infer their causes, but without knowing the baseline it is easy to misinterpret a non-difference as something uninteresting, even if it is actually the result of a change in evaluations and can have potentially important consequences for people judging and being judged.

Furthermore, the results showed that the order of perceiving positive and negative information can be important as it causes opposite expectancy violations and changes the evaluations even for the same target. This was shown when in two out of three experiments Turkish-looking individuals who spoke standard German positively violated negative expectations and were evaluated as the most competent of all targets, but this was the case only when they were first seen (appearing Turkish) and the standard accent was heard later (Experiment 2a) or the two were presented together (Experiment 1). However, a standard accent followed later by a Turkish appearance led to negative expectancy violation and worse evaluation (Experiment 2b). Practically speaking, Turkish-looking standard speakers will be evaluated much more positively if seen first, rather than heard first. Future research should test the boundary conditions of this order effect. For instance, would it suffice to present a Turkish

name first to obtain positive expectancy violations when standard speech would be heard?

Exploring order effects was possible in two experiments when faces and voices of targets were presented sequentially and the sequence forced participants to form their expectations based on the first piece of information. Comparing the pattern of results from these experiments with the other experiment where both pieces of information were presented almost at the same time, one can check which piece of information participants spontaneously used as a basis for forming expectations. We hypothesized that when targets' appearance and accent are available at the same time, appearance is a basis for forming expectations. This was confirmed by the pattern of results in Experiment 1 where the targets who appeared Turkish (negative expectations) but spoke standard German (positive violations) were evaluated the best. An additional piece of evidence confirming that appearance is the basis for forming expectations is the fact that the final pattern of results of Experiment 2a (with appearance presented first) was similar to the one from Experiment 1 (with appearance and accent presented together) whereas the pattern from Experiment 2b (with accent presented first) was different. This means that when visual and auditory information was presented together, participants spontaneously based their expectations on targets' appearance and in some cases accents violated those expectations.

With the dynamic approach to expectancy violations we obtained also another piece of evidence for the power of accent as a cue in impression formation. This evidence comes from the comparison of different patterns of results in Experiments 2a and 2b. In Experiment 2a there was no difference in perceived competence of targets based on how they looked, but evaluations diverged (became more extreme) when their accents were heard. In Experiment 2b based only on voices standard German speakers were evaluated more positively than Turkish-accented speakers, but the evaluations converged when faces were presented, reducing this difference. Also, it did not matter if targets appeared German or Turkish, any appearance made the accent-based evaluations less pronounced. These results are in line with our predictions that standard and nonstandard voices allow

for more extreme judgments but faces make the evaluations more moderate. Whether the effect of visual information mitigating extreme evaluations based on accent is due to dilution effect (Nisbett, Zukier, & Lemley, 1981) should be explored in future studies.

### **2.7.3 Interpretations of own surprise**

Related to the differentiating effect of accent, people might reason which attributes of humans are acquired and which are more due to genetics. As people have little influence on their skin color, shape of face or nose, appearance can be perceived as a basis for evaluations. In contrast, accent is perceived as something more flexible and may be treated as more diagnostic for competence. Some might use it as an approximation of a person's general competence or as a cue to draw inferences about a person's place of birth (cf. Introduction). People might treat accent as more changeable, even in adults, than it really is (for reviews, see Gluszek & Dovidio, 2010; Scovel, 2000). Consequently, they may infer that a nonstandard-accented speaker was not persistent or even intelligent enough to lose this foreign accent while his originally also nonnative- but now standard-accented colleague was. Nevertheless, our results suggest that accent itself was not used as an indicator of low abilities. The results showed that changing only the sequence of presenting appearance and accent changes evaluations of the same targets. If accent were just a diagnostic tool for assessing competence, it should have worked in both sequences in the same way. Results of other studies also showed that accent is not a general low competence indicator but is rather associated with specific stereotypes of certain social groups (Ryan, 1983). If accents were just a signal of low competence, other foreign-accented speakers should be evaluated similarly to Turkish-accented speakers. However, earlier studies, conducted also in Germany, showed that French-accented speakers were not perceived as less competent than standard German speakers, whereas speakers with regional accents (Saxon, Bavarian) were perceived as less competent (Rakić, 2008; Rakić, Steffens, & Mummendey, 2011b).



Perceptions of the extent to which Turkish-accented targets could have changed their accent might not be clear in our experiments, but interpretations of why some Turkish-looking targets spoke standard German were quite clear: They were perceived to have immigrant background, but to be born or/and raised in Germany, and to be well integrated. With people who appeared typically German but spoke with a Turkish accent the matter was more complicated as, interestingly, some of the participants automatically resolved this cognitive problem by perceiving the Turkish accent as a Northern or Eastern European one. It is worth noting that there are not many German-looking people speaking with a Turkish accent in Germany. Those who do, are either people with a Turkish background but just having a lighter skin color or people without an immigrant background but living in a district with large Turkish minority. Nevertheless, the effect still shows that, even if held constant, a Turkish accent gave rise to different interpretations after a typical German face and a Turkish face. This resembles an effect found when students who listened to the same lecture but saw a photo of an Asian (as compared to a White) instructor perceived the speech as more accented (Rubin, 1992). However, in our experiments such a change of perceptions occurred only for German appearance and Turkish accent, but not for Turkish appearance and standard German.

This effect can also explain why we did not observe overt negative expectancy violations in Experiment 1. If some participants perceived the accent as Northern or Eastern, it was for them less negative than a Turkish accent and the expectancy violation caused by a German-looking target speaking with a non-German European accent was for them smaller or even non-negative than it would be with a Turkish accent. Because of these interpretational differences, comparisons of the results for the two types of incongruent targets should be done with due caution as they might reflect different phenomena. In the case of Turkish-looking targets, a Turkish or a standard German accent did not cause a change in perception of their ethnic origins, they were still perceived to have immigrant background, but to be born in Germany or in Turkey. In the case of Ger-

man-looking targets, an accent was sometimes a cue for re-categorizing a German person as a non-German European.

#### **2.7.4 Limitations and future directions**

One methodological concern of the experiments is that participants saw several job candidates who all said the same sentence. Whereas this held the content of the text constant, it could have drawn participants' attention to the different accents. This way, they could have avoided showing biased reactions. Nevertheless, motivation to respond unprejudiced did not influence evaluations (Experiment 1), which is noteworthy in and of itself. Also the results did clearly show differences between Turkish-accented and standard speakers, demonstrating that discriminatory evaluations were not controlled by our participants. Apparently, they indicated quite openly their accent-based discriminatory evaluations.

One limitation of our experiments is their external validity. We used faces and voices pre-tested for attractiveness and pleasantness. We did so in order to exclude the influence of those factors on evaluations, but we are aware that using pre-tested stimuli may result in an unrealistic sample of the population.

A related issue is the simplicity of the experiment. Although using voices yielded more information about targets than only faces, and although thin slices research (Ambady et al., 2000) shows that a few seconds are enough to form a quite accurate impression of a person, people are much more complex than just a face and a voice saying two short sentences. Also, accent and appearance may interact in more complex ways with other social markers like gender or age to shape judgments and influence decisions.

The present experiments analyzed the process of expectancy violations and answers to open-ended questions indicated how people interpreted their own surprise. What still needs to be examined is what cognitive processes and cognitive states are associated with expectancy violations. The analysis of reaction times of categorization showed that participants needed more time to categorize incongruent targets than congruent ones, suggesting that categorization of incongruent targets was less automatic. Research has

shown that when people meet a counter-stereotypical person, the discrepancy leads to re-categorization until an appropriate relevant category or subcategory is found (Brewer, 1988; Fiske & Neuberg, 1990; Hutter & Crisp, 2006; Kunda & Thagard, 1996). The results suggest that not all incongruent people provoke the same re-categorization process. Regardless of this, the surprise is present and some other questions arise: Do expectancy-violating people evoke in others a different style of information processing than expectancy-confirming people? If so, is this process cognitively demanding? Is this process possible under cognitive load? As previous research has shown (e.g., Mendes et al., 2007) and participants' reflections in our experiments suggest, expectancy violating people cause emotional arousal. It would be interesting to explore whether people change their emotional and cognitive state when encountering incongruent targets, and what consequences this can have for both parties. As Crisp and Turner (2011, p. 1) wrote: "when social and cultural diversity is experienced in a way that challenges stereotypical expectations (...) the experience has cognitive consequences that resonate across multiple domains." We hope that this research, by stressing the importance of accents and expectancy violations in impression formation, can be a starting point to explore these issues.

### **2.7.5 Applications**

Results of the current research have several theoretical and practical implications. The proposed dynamic approach contributes to the expectancy violations theory both conceptually and methodologically. It allows for detecting and interpreting effects of expectancy violations better and more unambiguously. It also enables researchers to measure the magnitude of each effect of a violation. More conceptually, it underscores theoretical and practical importance of changes in evaluations, which can have substantial consequences for the people being judged.

Some specialists encourage companies to detach from a resume any information that could cause bias: name, photograph, gender, place of birth, and others. In case of candidates in our experiments, this would help them to be invited to a job interview, but

would not help those who speak with an accent during the interview. Our results may suggest that Turks in Germany would benefit from learning German at an early age and that foreign-looking standard-accented people should initiate contacts by first letting others see them and later hear them speak to evoke positive expectancy violations. We think that these are reasonable conclusions, but we would also like to draw attention to the other side of the coin. The current and widespread approach to communication problems between native and nonnative speakers is to reduce the accent of the nonnative speaker (e.g., Carlson & McHenry, 2006). This is not only difficult to achieve, but it also focuses the attention only on one person's responsibility. We believe that it is important to see a bigger picture that includes language, culture, and the context of communication and to address also the role of native speakers' consciousness and responsibility (see also Gluszek & Dovidio, 2010).

Professionals conducting interviews of job candidates could be influenced by processes like those we identified. More broadly, whenever there are processes of evaluations and space for subjectivity in judgments, pieces of information which are socially relevant can bias those judgments in positive and negative ways. Language and accents are present everywhere where personal, phone or voice-chat communication takes place and variations not only in the content of a statement but also in its form can strongly influence the perception of others. In today's world of global migration people already know that they should not discriminate against others on the basis of how they look. Now they should learn not only not to "judge the book by the cover", but also not to "judge the person by the accent".

### **2.7.6 Conclusions**

The current line of research has confirmed and extended some previous findings by showing that accents are important cues for categorization and evaluation of people. It also has shown effects of expectancy violations and, by using incongruent German/Turkish and Turkish/German targets, it extended a bipolar native/foreign ethnicity distinction to more complex combinations. However, in our experiments the manipulation of native/foreign accents was at the

same time a manipulation of standard/nonstandard accents. To disentangle between those, in the subsequent line of research we used a standard and a nonstandard but native regional accent. To avoid adding too many dimensions at the same time and allowing for contrast effects not only between standard/nonstandard but also native/nonnative accents, we eliminated nonnative accents from the study and concentrated on the native ones.

In order to avoid possible effects of presenting the stimuli twice, we used a partly between-participants design. The first line of research confirmed that when both pieces of information were presented together, expectations were based rather on appearance than on accents. Therefore, we used appearance information as a baseline and point of reference: Participants were presented with each target only once but half of participants only saw the targets and the other half both saw and heard the targets.

The second line of research examined how especially interesting Turkish-looking regional-accented job candidates would be evaluated. It also sought to replicate, with a different design, positive expectancy violations effect from the first line of research.

### **3 The Relative (Un)Importance of Appearance in Comparison to Standard and Regional Accents**

Imagine that you are sitting in a café in Germany and at the next table sits a Middle-Eastern-looking man. You are asking yourself where he is from. After a while the man approaches you and asks in a local accent whether he could borrow the sugar bowl. You are surprised by his regional accent. But would you consider him less or more competent than a German-looking person speaking with the same accent? The reader might have not experienced the exact situation, but might have experienced doubts about the competence of someone speaking with a regional accent. What most humans certainly have experienced is that someone violated our expectations. In times of globalization and intensified migrations, encounters with people who violate our expectations by the way they speak are becoming increasingly frequent. They happen in a café, but can also happen in a formal situation such as a job interview. When choosing an employee, employers would like to see whether a candidate is competent or not, and might base their decision on objective qualifications as well as subjective impressions. Especially in the case of a foreign-looking applicant, a standard accent in speech makes a very good impression (see Chapter 2). But what about a native but non-standard regional accent? On the one hand it suggests that the person grew up in the country and is well integrated, but on the other hand regional-accented speakers are perceived as less competent and employable than standard speakers (e.g., Carlson & McHenry, 2006; Rakić et al., 2011b). However, studies examining attitudes towards dialects and regional accents did not include information about the appearance of a speaker. When visual and auditory cues indicate different ethnicities of a person, both types of cues can play an important role in forming impression of such an individual. The goal of the current line of research is to investigate whether appearance plays a role in forming impression of a person when it is contrasted with a standard and with a regional accent. We address a top-

ic not studied before but increasingly important and examine how foreign-looking people speaking with a regional accent are evaluated.

### **3.1 Native but Nonstandard Accents**

Regional dialects and accents are often ascribed lower prestige than standard accents and are perceived to be less pleasant to hear (Coupland & Bishop, 2007; Giles, 1970; van Bezooijen, 1994, 2002). Speakers of regional dialects and accents are perceived as less competent, intelligent, and ambitious (Giles, Baker, & Fielding, 1975; Levin, Giles, & Garrett, 1994; Luhman, 1990; for a recent review of accent attitudes in Europe, see Rakić & Steffens, 2012; Simičić & Sujoldžić, 2004). In studies framed in a job context, they are perceived as less competent and employable (Carlson & McHenry, 2006; Rakić et al., 2011b), and as suitable for lower status jobs than standard speakers (Giles, Wilson, & Conway, 1981; Markley, 2000). Speakers of regional dialects are also more likely to be perceived as guilty and are discriminated in the courts (Dixon, Mahoney, & Cocks, 2002; Lippi-Green, 1994). Furthermore, similar to foreign accents, regional accents are described as a speech pathology and accent modification trainings are recommended (Sikorski, 2005).

Although regional accents are so negatively perceived, as is also the case with nonnative accents, they are unlikely to bring to mind a cue of foreignness (Gluszek & Dovidio, 2010; Marvasti, 2005). Furthermore, speech with a regional but native accent is for native speakers easier to understand than speech with a nonnative accent (Adank, Evans, Stuart-Smith, & Scott, 2009; Floccia, Goslin, Girard, & Konopczynski, 2006). As research has shown, a regional accent, unlike a nonnative accent is not perceived as a cue of the speaker's poor language competence (Marvasti, 2005; Ryan, 1983). However, similarly as a nonnative accent, a regional accent activates stereotypes associated with a specific group to which the speaker presumably belongs (Lindemann, 2003; Ryan, 1983). Although nonstandard speech is not valued, people continue using their accent or dialect as it is an important part of their identity (for ethnolinguistic identity theory, see Introduction and Giles & Johnson, 1981, 1987).

### 3.2 Regional Accents and Expectancy Violations

In sum, the accent of a person can certainly strongly influence how she or he is perceived. However, impressions of others can be based on any available information about them and different cues can be combined to form an impression. Psychologists in the areas of impression formation, attributions, and attitude change have studied how different cues are combined in various aspects of social perception (for an integrative model, see Freeman & Ambady, 2011). Many models focused on the sequence of presentation of the cues and observed primacy or recency effects (e.g., Hogarth & Einhorn, 1992). With regard to expectedness or unexpectedness of a trait or behavior, it was shown that behaviors incongruent with the stereotype are more visible to observers and are remembered better (e.g., Hamilton & Rose, 1980). Although the literature in these areas is vast, to the best of our knowledge, these studies did not test effects of combinations of accent and appearance cues.

Regarding appearance and accents indicating the ethnicity of a person, only a few studies combined and contrasted the role of these cues and they did so looking at various social outcomes (see Introduction and Chapter 2). These studies showed that accent, as compared to appearance, plays a bigger role in social categorization (Rakić et al., 2011a, 2011b), competence evaluations (cf. Chapter 2), general evaluations of minority group members (Holmes et al., 2001), beliefs about general knowledge of foreign-accented speakers (Rödin & Özcan, 2011), and social preferences of children (Kinzler et al., 2009). However, it might be said that accent and appearance are too different and cannot be equated in one common metric. Regardless of whether one or the other is more important and whether the two can be directly compared, they certainly can interact and considering both gives a fuller and more realistic picture of processes of impression formation.

For example, accents with which people speak can confirm expectations based on their appearance, but can also be very surprising. A strong influence of unexpected information was studied not only in the scope of the earlier mentioned impression formation re-



search, but was also addressed by expectancy violation theory (see Introduction and Burgoon & Burgoon, 2001; Burgoon & Jones, 1976; Roesse & Sherman, 2007). To the best of our knowledge, three studies on expectancy violations used speech style or accent as a cue violating participants' expectations based on race or ethnicity. One of the studies showed that Whites who spoke nonstandard English were viewed more negatively than Blacks who did, in line with negative expectancy violations (Jussim et al., 1987). Furthermore, in this study, the range of evaluations of Black targets was larger than of White targets: The difference between evaluations of standard-English-speaking and nonstandard-English-speaking targets was bigger for Blacks than for Whites. Another study showed that participants interacting with Asians speaking with a southern American accent exhibited cardiovascular and behavioral threat responses and performed worse cognitively (Mendes et al., 2007, Experiment 3). Furthermore, as described in Chapter 2, experiments using accents and appearance showed not only negative, but also positive expectancy violations: Competence evaluations of German-looking targets decreased when they started to speak with a Turkish accent, but also evaluations of Turkish-looking targets increased when they started to speak with a standard German accent.

It seems that accent is a strong social cue that can violate expectations based on a person's appearance, but what still requires examination is how foreign-looking people speaking with regional accents are evaluated. The effect of appearance proved to be stronger than the effect of accent for physiological responses to Asian-looking targets with regional accents (Mendes et al., 2007). Furthermore, a series of experiments in Chapter 2 showed that for more explicit evaluations of job candidates, their accent had a stronger effect than their appearance, but foreign and standard, not regional, accents were used. A study showing evaluations of foreign-looking targets violating perceivers' expectations by a regional accent would shed more light on this issue.

### 3.3 Present Research

The present research examines people's evaluations of Turkish-looking people who speak with a regional German accent. By analyzing effects of native but regional accent on evaluations of foreign-looking people, we go beyond a foreign-native distinction. As, to the best of our knowledge, there is only one study combining foreign appearance with regional accent, we base our predictions also on a broader literature on accents, identity, and acculturation. Predictions made on the basis of different literatures are different: Foreign-looking regional-accented speakers could be evaluated more negatively (or as negatively as) native-looking regional-accented speakers, but they could also be evaluated better, or evaluations could depend on perceiving them as ingroup or outgroup members. Hence, three concurrent hypotheses emerged.

First, previous results have shown that conversation partners who looked foreign but spoke with a regional accent (Asians with southern American accents) negatively violated participants' expectations and evoked threat responses and less positive affect than typical partners (Whites with local accents; Mendes et al., 2007). Furthermore, foreign-looking regional-accented speakers could be perceived as combining two cues of incompetence. Based on the one available result and combining results of accent attitudes studies and research showing that accent can be a very powerful social cue, we expected all regional-accented speakers to be evaluated more negatively than standard speakers, regardless of their appearance. Therefore, we predicted that a regional accent will negatively violate participants' expectations about both German- and Turkish-looking targets. Furthermore, we expected to replicate a positive expectancy violations effect and see standard-accented Turkish-looking targets to be evaluated as more competent and hireable than German-looking targets speaking also with a standard accent. Taking both predictions together, we expected the range of evaluations (standard versus regional accent) to be bigger for Turkish- than for German-looking targets (c.f. Jussim et al., 1987).

However, there is also a second possibility how foreign-looking regional-accented speakers could be perceived. Attributions of competence can differ for majority and minority group members speaking with a regional accent. As noted earlier, research has shown that regional accents, unlike foreign accents, do not bring to mind a cue of foreignness and are not perceived as an indicator of the speaker's poor language competence (e.g., Gluszek & Dovidio, 2010; Marvasti, 2005). A regional accent of minority members should also not be attributed to their lack of competence. Instead, speaking without a foreign accent, but with a regional one, can indicate their high competence. In the case of foreign-looking people a regional accent would be certainly surprising, but interpretations about the good integration of such people into society and about their high determination and competence could lead to a positive evaluation. Thus, if Turkish-looking people speak German with a regional accent, one might expect a contrast effect: That they are evaluated higher than German-looking people speaking with the same regional accent. Thus, speaking with a regional accent would be a negative expectancy violation for German- but not for Turkish-looking targets.

A third possibility is that evaluation of the foreign-looking regional-accented speakers would depend on perceiving them as ingroup or outgroup members. Social identity theory (SIT; Tajfel, Billig, Bundy, & Flament, 1971; Tajfel & Turner, 1979) concentrates on processes in which individuals identify with social groups and evaluate their ingroup positively and outgroup negatively. Therefore, according to SIT one would predict that people for whom the speakers would be ingroup members would evaluate them positively. For example, people speaking with a Saxon accent themselves would evaluate Saxon speakers more favorably than would do so speakers with different accents.

### **3.4 Pilot Experiment**

In order to make clear the difference in status between the standard and a regional accent, we wanted to choose an accent associated with low competence. According to a representative survey, Saxon dialect is the most disliked of German dialects and Bavarian

dialect is polarizing: Some like it some do not (Eichinger et al., 2009). However, liking and competence ascriptions are different and also label *Saxon accent* is not the same as hearing a voice with this accent. A study which used voice samples rather than labels did not show differential competence and hirability ratings of speakers with Bavarian, Berlin, and Saxon accents (Rakić et al., 2011b). Due to these ambiguities, to test our audio stimuli and select an appropriate accent, we conducted a pilot study.

To avoid grammar and vocabulary influencing the evaluations, we used regional accents instead of regional dialects. As in the main experiment we wanted to use only male targets, we did it also in the pilot study. We chose males for the same reasons as in experiments in Chapter 2 and also for comparability of results with Chapter 2.

Participants were 57 undergraduate students ( $M_{\text{age}} = 22.67$ ,  $SD = 3.97$ ) of the University of Jena, Thuringia, Germany. They were presented with voices speaking with a standard German, Bavarian, and Saxon accents and were asked to evaluate how competent these people appeared. The results showed a relatively strong effect of accent on competence evaluations,  $F(3,54) = 9.10$ ,  $p < .001$ ,  $\eta_p^2 = .34$ . Targets who spoke standard German were evaluated to be more competent ( $M = 4.75$ ,  $SD = 0.71$ ) than those who spoke with a Saxon accent ( $M = 4.11$ ,  $SD = 0.80$ ,  $p < .001$ ). However, targets speaking standard German were not evaluated as significantly more competent than Bavarian-accented targets ( $M = 4.50$ ,  $SD = 0.64$ ,  $p = .24$ ). At the same time those who spoke with a Bavarian accent were judged to be more competent than Saxon-accented candidates ( $p = .005$ ). The results showed that participants distinguished between two regional accents and speakers with a Saxon accent were perceived as least competent. Therefore, we chose Saxon accent for our main experiment.

### 3.5 Method

To test the three competing hypotheses, we conducted a computer-based experiment. Participants saw German- and Turkish-looking targets speaking with a standard German accent or with a regional accent and were asked to evaluate their competence. The

experiment was conducted in Thuringia, a region neighboring to Saxony. In order to assess baseline evaluations based on appearance, half of the participants only saw the targets and the other half both saw and heard them.

### 3.5.1 Participants

Participants were 320 visitors of Long Night of Science in Jena. After excluding 18 participants who did not notice that some of the speakers had a regional accent, the final sample consisted of 302 participants (121 men)<sup>3</sup>. They were aged between 10 and 73 years ( $M_{\text{age}} = 29.67$ ,  $SD = 12.56$ ). Among them, 50% declared to speak a Thuringian dialect and a further 11% to speak a Saxon dialect. Participants were relatively educated, as 40% finished college. They declared to have on average weekly contact with people of other ethnicities than their own. As compensation, they were given coffee and sweets and were provided with a thorough feedback about the study.

### 3.5.2 Design

There were two conditions in the experiment: Half of the participants saw only faces of German- and Turkish-looking targets, and the other half both saw the faces and heard the targets speak. Thus, for half of participants the experiment had just a within-subjects appearance factor (German vs. Turkish) and for the other half it had a 2 (appearance: German vs. Turkish)  $\times$  2 (accent: standard German vs. German with a Saxon accent) design. For the latter group there were four targets to evaluate: German appearance/German accent, German appearance/Saxon accent, Turkish appearance/German accent, and Turkish appearance/Saxon accent. All participants saw also a fifth filler German/German target for training purposes and to prevent suspicion about the high percentage of Turkish-looking and of regional-accented job candidates.

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<sup>3</sup> From the 18 participants ten were foreigners and eight Germans from different regions of Germany.

### 3.5.3 Materials and procedure

After being welcomed by an experimenter, participants were seated in front of a computer screen and asked to sign the informed consent form. For participants who were under age parents signed the form. When needed, under-aged participants were provided with support and additional clarifications. In the experiment participants were asked to imagine that they were helping in a recruitment process at their workplace. For all targets, participants were asked to look at the photo of a face and half of participants were additionally asked to listen to a voice. All participants were asked to evaluate the person's competence. All stimuli were earlier carefully selected and pre-tested (see Appendix B). Each face was shown for five seconds and voice samples were three seconds long; there was a one second pause between each face and voice. Matching of faces and voices was random, but restricted in order to obtain four different target types. Targets were presented in random order. As the dependent measure, we used the same competence scale as in Chapter 2 ( $\alpha_{\text{faces}} = .88$ ,  $\alpha_{\text{faces+voices}} = .91$ ). Participants also indicated whether they would hire the candidate. At the end, participants filled out a short version of the German motivation to respond without prejudice scale (Banse & Gawronski, 2003; Dunton & Fazio, 1997), indicated whether they noticed that some targets spoke with a regional accent, answered a few demographic questions and questions about their use of dialect and their accent strength in that dialect. Afterwards, they were fully debriefed, given an opportunity to talk about their impressions, and leave their e-mail address, where a few weeks later they received a summary of results. When no questions remained unanswered, participants were thanked, and dismissed.

## 3.6 Results

Competence evaluations and hirability ratings were highly correlated,  $r = .72^{**}$ . Thus, in the subsequent analyzes we used only competence ratings. After excluding under-aged participants from the sample, results stayed the same. Therefore, we retained the di-

versity of our sample and used the data of participants of all ages in the analyses.

In order to set the baseline of evaluations, we first tested if based only on their photographs German- and Turkish-looking targets were perceived as similarly competent. The results showed that Turkish-looking targets were perceived as more competent than German-looking targets,  $t(161) = 3.48, p = .001$  (see Figure 4). As motivation to respond without prejudice can influence such evaluations, we conducted a regression for repeated measures, where we included appearance, motivation to respond without prejudice, and their interaction. All of these were significant predictors of competence evaluations (Table 2). Figure 5 depicts the interaction and shows that the higher the motivation to respond without prejudice, the better the evaluations of Turkish-looking targets ( $r = .24^*$ ), but there was no such effect for German-looking targets ( $r = .06$ ). Although the difference in evaluations of German- and Turkish-looking targets was unexpected and rather undesired, it influences only some of the comparisons and works against our first and main hypotheses that Turkish-looking targets with a Saxon accent would not be perceived as more competent than German-looking targets with the same accent.

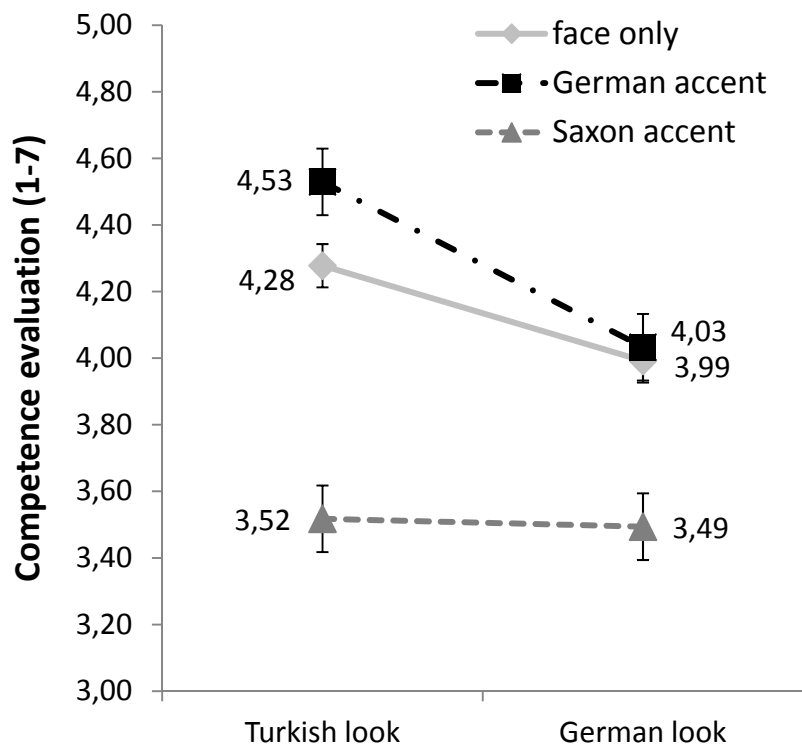


Figure 4. Mean competence evaluations by target type and condition: condition with faces only ( $N = 161$ ), condition with faces and standard German accent or Saxon accent ( $N = 141$ ). Error bars represent standard errors of the mean.

Table 2

*Results of Regression for Repeated Measures: Appearance and Motivation to Respond without Prejudice Predicting Competence Evaluations of Targets.*

	<i>B</i>	<i>B(SE)</i>	95% CI	Wald	<i>df</i>	<i>p</i>
Intercept	4.98	.54	[3.92, 6.04]	84.31	1	< .001
Motivation	-.29	.11	[-0.51, -0.06]	6.31	1	.01
Appearance	-.79	.36	[-1.50, -0.08]	4.76	1	.03
Motivation*App.	.24	.08	[0.90, 0.39]	9.77	1	.002



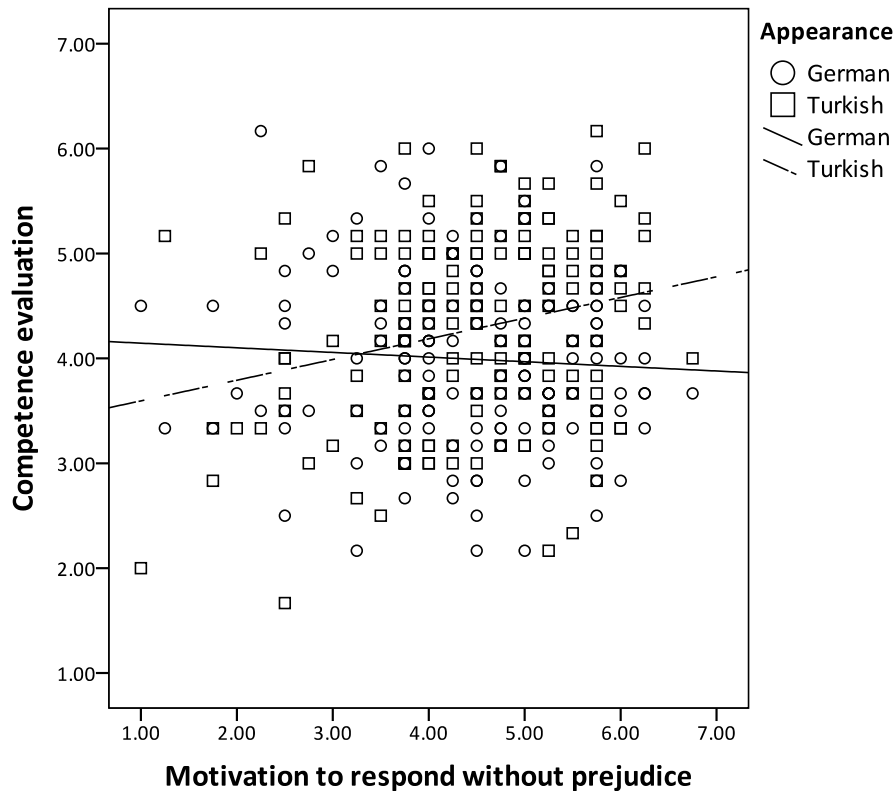


Figure 5. Illustration of the interaction effect of appearance and motivation to respond without prejudice.

When evaluating based on photographs of faces, some participants were preoccupied to appear prejudiced towards Turkish-looking people. However, in an analogous regression for participants who could both see and hear the candidates, motivation to respond without prejudice did not significantly predict evaluations,  $B = -.16$ ,  $SE = .39$ , Wald's  $\chi^2 = 0.17$ ,  $p = .68$ , nor there was any interaction effect of this motivation, all  $B$ s  $< \pm .19$ , Wald's  $\chi^2$ s  $< 0.56$ ,  $ps > .45$ . It seems that some participants corrected their responses when they saw candidates' faces but for participants who also heard the voices, the desire not to appear prejudiced was weaker, which is in accordance with some researchers saying that norms not to express prejudice towards nonstandard speakers are rather weak (Lippi-Green, 1997, 2012).

Therefore, to examine the influence of accent and appearance on evaluations, we omitted motivation to respond without prejudice and conducted a 2 (appearance: German vs. Turkish)  $\times$  2 (accent: standard German vs. Saxon) repeated measures ANOVA. Results showed that candidates with a standard accent were seen as more competent ( $M = 4.28$ ,  $SD = 0.95$ ) than candidates with a regional Saxon accent ( $M = 3.51$ ,  $SD = 0.99$ ),  $F(1,140) = 59.28$ ,  $p < .001$ ,  $\eta_p^2 = .30$ . More importantly, the combination of accent and appearance influenced evaluations,  $F(1,140) = 7.12$ ,  $p = .009$ ,  $\eta_p^2 = .05$ . Thus, we could test our concurrent hypotheses and see whether Turkish-looking speakers of the standard and Saxon accents are evaluated better, worse, or similarly as German-looking speakers of the same accents.

First of all, analyses of simple main effects showed that the Turkish-looking candidate speaking with a standard German accent was evaluated better than the German-looking candidate with the same accent,  $F(1,140) = 14.24$ ,  $p < .001$ ,  $\eta_p^2 = .09$ , showing the effect of positive expectancy violations. Additionally, the Turkish-looking candidate was perceived as more competent when he spoke with a standard German accent than when he was only seen,  $t(302) = 2.05$ ,  $p = .04$ . Hence, even though expectations to his competence based on his face were already high, with the standard accent he was evaluated even better. The hypothesis of positive expectancy violations was confirmed and the results replicated, with a different design, findings from Chapter 2.

However, when speaking with a regional Saxon accent German- and Turkish-looking candidates were evaluated similarly,  $F < 1$ . Thus, the second hypothesis stating better evaluations of Turkish-looking targets was rejected. The results indicated support rather for the first hypothesis stating that when speaking with a regional accent, appearance would not matter as both German- and Turkish-looking targets were evaluated as more competent when they spoke with a standard accent than when they spoke with a regional accent.

Furthermore, analyzes following up on the above mentioned interaction of accent and appearance confirmed our predictions that for Turkish-looking targets it would matter more with which accent they speak. The effect size of the difference between standard and

regional accent was larger for them,  $\Delta M = 1.01$ ,  $F(1,140) = 58.17$ ,  $p < .001$ ,  $\eta_p^2 = .29$ , than for German-looking targets,  $\Delta M = 0.54$ ,  $F(1,140) = 15.80$ ,  $p < .001$ ,  $\eta_p^2 = .10$ .

As a last step, we tested the social identity hypothesis with a 2 (appearance: German vs. Turkish)  $\times$  2 (accent: standard German vs. Saxon)  $\times$  3 (own dialect: Thuringian vs. Saxon vs. other) mixed ANOVA. The results showed that there was no significant main effect of participants' dialect ( $F < 1$ ), and two out of three possible interactions including dialect were far from being significant ( $F_s < 1$ ). Furthermore, although the third interaction, of type of dialect spoken by participants and accent used by the targets, was not significant,  $F(2,155) = 1.92$ ,  $p = .15$ ,  $\eta_p^2 = .02$ , the pattern of results was interesting. It showed that descriptively who evaluated Saxon-accented targets as least competent were speakers of Saxon dialect ( $M = 3.34$ ,  $SD = 1.28$ ;  $N = 17$ ), followed by speakers of Thuringian dialect ( $M = 3.54$ ,  $SD = 1.14$ ,  $N = 75$ ), and others ( $M = 3.65$ ,  $SD = 1.29$ ,  $N = 66$ ). Although these results are based on unequal samples and are only descriptive, they go in the opposite direction than predicted by social identity theory. Thus, taking all the above into account, we rejected the hypothesis that participants speaking the same or a similar dialect as the candidates would evaluate the candidates more positively than would other participants.

### 3.7 Discussion

The results of the experiment confirmed our first hypothesis that when speaking with a negatively perceived regional accent, appearance would not matter. Data showed that when job candidates spoke with a regional accent, they were perceived as less competent than standard speakers, regardless if they were German- or Turkish-looking. Ipso facto we rejected the second hypothesis predicting better evaluations of Turkish-looking targets speaking with a regional accent. At the same time the Turkish-looking candidate was perceived as more competent when he spoke with a standard German accent than when he was only seen, suggesting that his standard accent positively violated participants' negative expectations. This suggests that, as anticipated, participants expected Turkish-looking

people to speak with a Turkish accent and German-looking people to speak with a standard accent. As one can see, effects of accents were strong but asymmetric. Turkish-looking job candidates who were heard to speak with a positively valued standard accent appeared more competent than German-looking job candidates with the same accent. At the same time all candidates who spoke with a negatively valued regional accent appeared incompetent, regardless of how they looked. Furthermore, for Turkish-looking targets the difference between evaluations when they spoke with a standard and with a regional accent was bigger than for German-looking targets. Thus, for them it mattered more with which accent they spoke. This suggests that expectancy violations for Turkish-looking targets were bigger than for German-looking targets.

By exploring reactions to people with a foreign appearance and a local regional accent, this research complements studies on accent attitudes and research combining accent and appearance cues. The results contribute to the expectancy violations literature and show how positive and negative expectancy violations can be different and asymmetric. They also showed an effect similar to effects observed in Chapter 2 with native and foreign speakers: The range of evaluations of Turkish-looking targets was larger than of German-looking targets (see also Jussim et al., 1987). The results also support the literature showing that accents are strong social cues (Kinzler et al., 2009; Rakić et al., 2011a; Rödin & Özcan, 2011). Even though in the recordings the strength of the regional accent was only moderate, the data showed clearly that this accent was perceived negatively, regardless of the candidate's appearance. Further studies are needed to test if under specific circumstances or on specific measures foreign-looking people speaking with a regional accent might be perceived more positively than native-looking people speaking with the same accent. For example, it might be that such people are perceived as incompetent but warm.

Furthermore, the current experiment used both auditory and visual cues contributing to the language and accent attitudes research (Giles & Coupland, 1991; Lippi-Green, 1997, 2012) and to the impression formation literature studying combination of different

cues in person perception (e.g., Freeman & Ambady, 2011). While appearance did not matter when targets spoke with a regional accent, it did when they spoke with a standard accent. In times of increased immigration and high ethnic diversity of today's societies, researchers studying the influence of accent or appearance on person perception should consider including also the other type of information in their studies.

Interestingly, the fact of speaking or not with the same dialect as the targets did not influence evaluations. Thus, the social identity hypothesis was rejected. This result shows that valuing one's own ingroup, a core process described by social identity theory (Tajfel & Turner, 1979), does not always happen. Although some studies reported high participants' evaluations of an accent labeled as *identical to own* on social attractiveness (also for Saxon accent, Eichinger et al., 2009) as well as on the prestige dimensions (Coupland & Bishop, 2007; Giles, 1970), our data show that this is not always the case. However, all above mentioned studies used only labels and not actual voice samples. Studies that used audio samples have found positive effects for own accent mainly on social attractiveness but not on the prestige dimension (Abrams & Hogg, 1987; Edwards, 1977). Moreover, by using a label *accent identical to your own* one can clearly indicate an ingroup, but while using recordings it is more difficult. An accent spoken in a next town to where the participant lives can already be perceived as an outgroup accent. Therefore, even if voice recordings might be seen as more ecologically valid than labels, it might be difficult to clearly induce ingroup-outgroup distinction in such a setting.

Altogether, the experiment showed that the accent with which the job candidates spoke was very important and the appearance mattered only when speaking with a standard, but not with a regional accent. From these results new questions arise. We purposely chose a low-status accent, but would evaluations depend on a specific regional accent and would a high-status regional accent evoke effects similar to standard or rather to nonstandard accents? Furthermore, if German- and Turkish-looking people speaking with a regional accent are evaluated as similarly competent, would they be

perceived to be similarly warm? We hope that future studies will shed more light on these issues. Coming back to where we started, our study implies that the Middle-Eastern-looking man, surprisingly speaking with a local accent, wouldn't be perceived as competent, but if he spoke with a standard accent, he definitely would.

### **3.7.1 Conclusions**

The two lines of research have clearly shown lower competence evaluations of nonstandard-accented speakers. Such judgments can have important consequences for people being evaluated, but also for the evaluators themselves. Discrimination on the level of evaluations can lead to discriminatory decisions and behaviors. To prevent these from happening, one could intervene even before the negative impressions would have been formed. The last line of research presents such attempt. We designed an intervention in which evaluators were put for a moment in the shoes of the evaluated.

## 4 Preventing Discrimination of Nonstandard Speakers

In today's world of migration and globalization intercultural and interethnic communication is very important. In such encounters some people are discriminated based on their race, ethnicity, and also based on their native language or accent (Fuertes et al., 2012; Gluszek & Dovidio, 2010). Although numerous studies have shown negative evaluations of nonstandard speakers, there are hardly any studies focusing on the prevention of discrimination based on accents. Instead, the tradition in language research is to recommend accent modification trainings to the speakers rather than to prevent biased evaluations on the side of the prejudiced listeners (e.g., Shah, 2012). The latter could be done by making the listeners experience themselves how it is to be in the position of a nonstandard speaker. In general, having a first-hand experience in something can change one's attitudes and future behaviors. Although this could be considered common knowledge, it plays a major role neither in language research nor in social psychological studies. In the last decades many automatic stereotype activation and behavioral priming studies have shown an effect of perceiving others on one's own behavior. Surprisingly, there is little research on the converse: How experiencing one's own behavior affects perceiving others. This is demonstrated in the present chapter in an intervention in which what participants' experience influences how they later evaluate speakers with a non-standard accent.

Nonstandard-accented speakers are rated as less intelligent, competent, attractive, and as being of lower social status than standard-accented speakers (e.g., Gluszek & Dovidio, 2010). They are discriminated against in employment (e.g., Nguyen, 1993), on the housing market (e.g., Zhao et al., 2006), and in the courts (e.g., Lippi-Green, 1994). Whereas there is a substantial body of research on preventing biases towards people based on their skin color, ethnicity, or gender, to the best of our knowledge, there is only one study that proposed an intervention reducing accent bias (Weyant, 2007). This

study showed that taking the perspective of a Spanish-accented person in the U.S. can reduce bias against this person. Whereas this is an encouraging finding, a procedure less prone to social desirability effects would be advantageous.

One reason for the overall lack of research might be that social norms against language-based discrimination seem to be weaker than against racial or gender discrimination (Ng, 2007). For example, in a list of 105 potential targets of prejudice, nonstandard-accented speakers were not even mentioned (Crandall, Eshleman, & O'Brien, 2002). The closest (but a still distant and different) group were *college teachers with poor English skills*. They were placed next to alcoholics and ranked as being in the upper third of groups toward which expressing prejudice is acceptable (Crandall et al., 2002, p. 362). In times of high mobility and frequent encounters of speakers with standard and nonstandard accents, discrimination of the latter is likely to become more apparent.

One possible intervention strategy could be testing whether giving people a first-hand experience in speaking a foreign language changes their evaluations of nonstandard speakers. There is indirect evidence (from unrelated research areas on attitude and behavior change) that such first-hand experience could help diminish discrimination. One example of successful own-experience based intervention is "Alcohol-free on the road". This program has shown that young drivers, after a workshop that included experience of driving after small dose of alcohol, showed more awareness about the dangers of driving while intoxicated and indeed later appeared less often in the Public Prosecutor files than the control group (Brookhuis, de Waard, Steyvers, & Bijsterveld, 2011). Another own-experience based intervention showed that dietetics students who were put on a diet later had more positive attitudes towards overweight people than before the diet (Cotugna & Mallick, 2010).

Other indirect evidence suggesting that a first-hand intervention may be effective comes from behavioral priming research, showing that even subtle manipulations can change people's behavior, and this can occur outside of their awareness. The article that set the stage for behavioral priming studies showed, inter alia, that partici-



pants who were primed with words related to the elderly stereotype walked slower down the hallway (Bargh, Chen, & Burrows, 1996). Since then, numerous studies have shown that the priming of social concepts such as norms, emotions, social behaviors, or stereotypes can have effects across a wide array of psychological systems, such as perception, motivation, behavior, and evaluation (see reviews by Bargh, 2006; A. Dijksterhuis, Chartrand, & Aarts, 2007). In other words, the perception of others can affect one's behavior. Conversely, research on embodiment demonstrates that one's own physical sensations can affect the perception of others (for a review, see Meier, Schnall, Schwarz, & Bargh, in press). For example, participants perceived others as "warmer" after they held a warm rather than cold cup of coffee (Williams & Bargh, 2008). To the best of our knowledge, it has not been shown that one's own *behavior* affects the perception of others.

Whereas earlier studies have clearly demonstrated effects of priming a social category on behavior, some of them have not shown effects regarding the reverse order (i.e., *behavior* → *social category*) (Jonas & Sassenberg, 2006). However, the authors note themselves that as null effects, these findings cannot be interpreted unambiguously, and they invite more studies to test such effects. Explanations of behavioral priming draw on the theory of event coding, and it is claimed that behavioral priming effects can result from an overlap of perceptual and behavioral representations (Ap Dijksterhuis & Bargh, 2001; Hommel, Müsseler, Aschersleben, & Prinz, 2001). Whereas activations starting from perceptual representations might be experienced more often in everyday life, the overlap should allow for activation also from behavioral to perceptual representations.

Based on the above mentioned research and the few studies on experience-based interventions, we designed an intervention preventing biased evaluations of Turkish-accented speakers. We made German participants in the experimental group speak English while waiting for the experiment to begin. In that way, we made them experience a conversation in a nonnative language. We assumed that participants would be thus reminded that one is not less competent in general even if one is somewhat incompetent in a foreign lan-

guage. Consequently, they should evaluate other nonstandard speakers more positively. Taken together, in the control group we expected Turkish-accented speakers to be evaluated as less competent than speakers with a standard German accent. This difference should be diminished or removed in the experimental group. Furthermore, we predicted that participants in the experimental group would evaluate Turkish-accented speakers as more competent than would participants in the control group.

## **4.1 Method**

### **4.1.1 Participants**

Participants were 46 undergraduate students from a German university. Excluding data of four nonnative German speakers, the final sample consisted of 42 participants (15 men,  $M_{\text{age}} = 22.88$ ,  $SD = 4.48$ ), 20 (7 men) in the experimental and 22 (8 men) in the control group. Participants were compensated with either €1 and a chocolate bar or partial course credit.

### **4.1.2 Materials and procedure**

When arriving at the laboratory, all participants were asked to wait for a moment in the hallway. A Caucasian female confederate approached those in the experimental group and asked in English for help (i.e., finding the way to the library and soliciting information where to store her backpack). Participants from the same population ( $N = 16$ ) who took part in a pilot experiment could not indicate which country she was from and if she was a native or a nonnative English speaker. Random assignment of participants to experimental and control conditions was attained with the help of a randomization list used by the confederate. Most of the participants came alone, but if they were in pairs, the confederate took care to address both of them and to engage both in the conversation. The conversation lasted about two minutes, then the confederate thanked for the help, and participants entered the laboratory. The confederate took notes concerning participants' level of nervousness exhibited during the conversation.

In the laboratory, participants were seated in front of a computer screen and asked to sign the informed consent form. Participants were asked to imagine that they were helping in a recruitment process at their workplace and that they received phone calls from eight job candidates. Participants were asked to listen to all candidates (four with a standard German accent and four with a Turkish accent in German) and evaluate them on a few traits. We chose same voice samples as in Experiments 2a and 2b in Chapter 2. As the main dependent measure, we used again the competence scale ( $\alpha = .91$ ).

At the end, participants answered a few demographic questions and questions about the amount of contact with people of ethnicities different than their own, number of friends and acquaintances of other ethnicities, and a question about their accent strength in English. Possible suspicion was assessed by funnel debriefing where in a few questions participants indicated whether they noticed something unusual or felt influenced in some way before or during the experiment. As a last question, participants were asked whether they met the confederate or not. Then, they were fully debriefed and asked not to talk about the experiment with participants waiting outside the laboratory. On a separate page participants could provide their e-mail address for receiving a summary of results, they were given their reward, thanked, and dismissed.

## 4.2 Results

None of participants suspected that it was the confederate who approached them before the experiment, nor did anyone indicate to be influenced by this encounter. In order to examine the effect of the intervention on evaluations of targets' competence, we conducted a 2 (accent: German vs. Turkish)  $\times$  2 (group: experimental vs. control) mixed ANOVA and subsequent analysis of simple main effects. Analyses yielded an interaction effect of accent and group,  $F(1,40) = 4.87$ ,  $p = .03$ ,  $\eta_p^2 = .11$  (see Figure 6). Participants in the control group clearly perceived Turkish-accented speakers to be less competent than standard-accented speakers,  $F(1,40) = 24.45$ ,  $p < .001$ ,  $\eta_p^2 = .38$ , but this effect was not significant in participants who experienced the intervention,  $F(1,40) = 2.77$ ,  $p = .10$ . Furthermore, partici-

participants who spoke English before the experiment perceived Turkish-accented speakers as more competent than those who did not speak English,  $F(1,40) = 4.02$ ,  $p = .05$ ,  $\eta_p^2 = .09$ . Both groups evaluated standard-accented speakers similarly,  $F < 1$ . The results fully confirmed our hypotheses and showed that the intervention was effective in reducing bias towards Turkish-accented speakers.

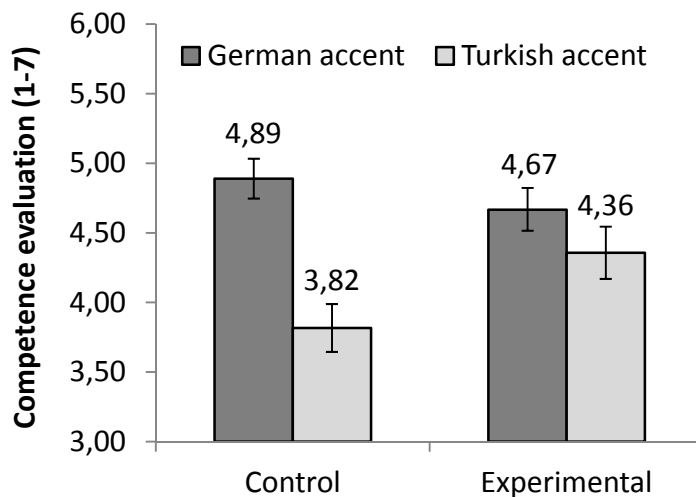


Figure 6. Mean competence evaluations by accent type and condition. Error bars represent standard errors of the mean.

We conducted a regression analysis to explore whether differences between participants other than the intervention might have influenced their evaluations of Turkish-accented speakers. Neither contact with different ethnicities ( $B = -.04$ ,  $SE = .16$ ,  $t < 1$ ), nor number of friends ( $B = .01$ ,  $SE = .06$ ,  $t < 1$ ) or acquaintances ( $B = -.03$ ,  $SE = .10$ ,  $t < 1$ ) of other ethnicity influenced evaluations. Furthermore, for the experimental group, neither their self-assessed accent strength in English predicted evaluations ( $B = .13$ ,  $SE = .12$ ,  $t < 1$ ), nor did the level of stress exhibited by them during the conversation ( $B = -.04$ ,  $SE = .42$ ,  $t < 1$ ).

### 4.3 Discussion

The present experiment shows that bias against nonstandard-accented speakers can be prevented by an intervention that puts the evaluators in the shoes of the evaluated. Participants who before the experiment made a short but challenging experience of speaking in a foreign language, did not discriminate against nonstandard-accented speakers as did participants in the control group. Demand effects could not account for the findings as participants were unaware of the fact that the conversation in English was part of the experiment. More generally, the present research complements behavioral priming and embodied cognition studies by demonstrating a link from one's own behavior to the perception of others.

Although some researchers (e.g., Jonas & Sassenberg, 2006) brought forward arguments for the uni-directionality of the priming effects, our results suggest that not only a social category can activate behavior, but also one's own behavior can change the evaluation of members of a social category. This resembles processes present in perspective-taking (e.g., Galinsky & Moskowitz, 2000; Trötschel, Hüffmeier, Loschelder, Schwartz, & Gollwitzer, 2011). However, in perspective-taking research participants imagine what would happen "if I were you", whereas in the present case having a first-hand experience allows them to (even unconsciously) realize that "I *am* like you". Regrettably, the current data do not allow us to elaborate on this part of the process. Future studies should shed more light on the *social category* → *self* link in such interventions.

Other explanations are conceivable of the process that caused better evaluations of Turkish-accented speakers in the experimental group. For example, a possible confound could be that participants' mood changed due to the conversation and influenced evaluations. However, even if their mood changed, results showed that the expression of this mood, which could be observed by the confederate, did not influence the evaluations. Actual mood might have been different than the observed symptoms, but in any case both stress caused by speaking in a foreign language and positive feelings about speaking with a friendly confederate would only reinforce the use of

stereotypes (Bodenhausen, Mussweiler, Gabriel, & Moreno, 2001), and our results demonstrate the opposite.

One ambiguity of the experiment that we cannot currently discard is that another, non-linguistic intervention could work in a similar way. Some researchers argue that an experience does not need to be domain-specific in order to evoke cognitive flexibility and rejection of stereotype use (e.g., Crisp & Turner, 2011). At the same time others claim that domain-specific experience is needed to attain cognitive flexibility in a particular domain (e.g., Benet-Martínez, Lee, & Leu, 2006). Similarly, it is possible that the current intervention would also prevent biases towards other discriminated groups. In other words, it could be that the effect of a linguistic intervention generalizes to non-linguistic discrimination. Future studies should address these questions. Furthermore, it seems desirable to corroborate a mechanism underlying the effectiveness of the intervention and look for moderators of this process.

The current research could be adapted to develop interventions applicable in practice. For example, diversity trainings could include an exercise of speaking in a foreign language and listening to one's own speech in a foreign language. This way, participants of such trainings could experience the difficulty of speaking in a foreign language, hear their pronunciation and reflect about the situation of people who are nonnative speakers of this language. Such exercise would extend and transpose the current intervention to a meta-cognitive level.

We hope that the current study will provoke more research addressing possible interventions against discrimination of nonstandard speakers. More generally, we think that there is a need for more own-experience based interventions. As the saying puts it: Actions speak louder than words.

## 5 Final Discussion

### 5.1 Summary and Interpretation of Results

The current dissertation examined how surprising and non-surprising combinations of how people look and with what accent they speak influence how these people are perceived, categorized, and evaluated. We examined this on the example of Turkish- and German-looking job candidates who spoke either standard German or with two nonstandard accents: a foreign Turkish accent and a German regional Saxon accent. We also showed how discrimination of nonstandard speakers can be prevented.

In the first experiment we replicated earlier results of Rakić and colleagues (2010): Using a different method and a different ethnic group, we showed a strong role of accent on social categorization of people. In this and in all further experiments in this dissertation, accent played a dominant role in evaluations of job candidates' competence. The results contribute to the body of research on the ethno-linguistic identity theory (Giles & Johnson, 1981, 1987) by indicating that language and accent are important social markers.

In all but one experiments appearance information was contrasted with accent information, and accents influenced competence ascriptions stronger than appearance. These results are in line with what was showed in earlier studies that contrasted these types of cues (e.g., Kinzler et al., 2009; Rödin & Özcan, 2011). It might be criticized that accent and appearance are simply different from each other and cannot be compared on the same metric. It could be also said that the choice of stimuli was arbitrary. Nevertheless, as reviewed earlier, stronger effect of accent than appearance was shown now in a few series of studies in different countries, using very different methodologies, different age groups of participants, and measuring the effects on various outcomes. Also in our experiments we replicated this effect with different sets of stimuli, in different experimental designs, and with different participant samples (undergraduates and a more diverse sample). Finally, even if there might be theoretical problems to contrast and weight the role of accent and appearance as

they are just different, when meeting and evaluating others, people unconsciously make such decisions. Effects of such impressions and decisions can have important consequences for the targets of these evaluations and thus should continue being studied.

Other important results of our several experiments were effects of expectancy violations (e.g., Burgoon & Burgoon, 2001; Roesse & Sherman, 2007). When negative expectations to Turkish-looking job candidates were positively violated by their standard German accent, they were perceived to be much more competent, not only than Turkish-looking Turkish-accented candidates, but also than German-looking candidates speaking standard German. We replicated this result with different sets of stimuli and using different approaches to measuring the effects of expectancy violations. Conversely, findings for the negative expectancy violations caused by German-looking candidates who spoke with a Turkish accent were initially (Experiment 1, Chapter 2) less clear, as they were evaluated similarly to (not worse than) Turkish-looking candidates who spoke with a Turkish accent. Based only on comparing the means this non-difference would be difficult to interpret. However, thanks to the baseline evaluations (Experiment 2a, Chapter 2) it was shown that evaluations of German-looking candidates decreased after they spoke with a Turkish accent, showing that they indeed negatively violated participants' positive expectations. These results support expectancy violation theory and show advantages of measuring the evaluations based on one piece of information and then a difference after the expectancy-violating information is added. These are the first studies in expectancy violations literature and using such method in future studies would shed more light on the process of expectancy violations (J. Burgoon, personal communication, January 26, 2012).

There might be a parallel drawn between aversive racism research and our result of a preference for Turkish-looking job candidates speaking standard German. In one of their studies Dovidio and Gaertner (2000) showed that there was no overt discrimination in hiring recommendations when White and Black applicants had clearly high qualifications, but when the applicants possessed moderate



credentials Black candidates were recommended less often. The result was interpreted as follows: When both candidates are perfect, the employer will rather choose the minority member not to be accused of discrimination, but when both applicants are moderately good and the choice is more ambiguous the decision maker will subconsciously choose the majority member and name weaknesses of the other candidate to rationalize his or her decision. We did not have any information about qualifications of the candidates. To assume that both were believed to have high qualifications, more data would be desired. It would be interesting to investigate how such credentials study would look like if voices of job applicants' could be heard.

In order to study the effects of nonstandard but native accents, we used a regional accent. The results showed that effects of standard and regional accents were strong but asymmetric: A positively valued standard accent caused a higher evaluation of Turkish-looking job candidates than of German-looking candidates with the same accent. However, a negatively valued regional accent caused low evaluations of all candidates, regardless of how they looked. The results showed that foreign and regional accent, although both nonstandard and valued negatively, had different effects on perceived competence of the speakers.

Regarding interpretations of why the candidates spoke and looked the way they did, answers to open-ended questions supported the sociological approach to language acquisition described in the introduction to this dissertation (B. Becker, 2010; Esser, 2006). Participants inferred from the standard accent of the Turkish-looking candidates that they were born in Germany and as children had a lot of contact with native speakers of German. Furthermore, the accent of German-looking Turkish-accented candidates was by some participants perceived not as a Turkish but as a Northern or Eastern European accent. Adding open-ended questions at the end of a strictly designed experiment seems advantageous as it helps to better understand the results and such freely generated interpretations are difficult to obtain in a different way.

In our last line of research we presented an intervention preventing biased evaluations of nonstandard speakers. Numerous studies have shown negative evaluations of nonstandard speakers, but there are almost no studies focusing on the prevention of discrimination based on accents. We aimed at showing that one's own experience can influence perception of others. Participants in the control group evaluated nonstandard speakers as less competent than standard speakers, but participants who before the experiment spoke in a foreign language themselves evaluated nonstandard and standard speakers similarly. This proves that, similarly as in a few earlier studies on other topics, we changed participants' perceptions and behavior by making them experience a difficult situation themselves (Brookhuis et al., 2011; Cotugna & Mallick, 2010). Differently to the previous studies, our intervention was not perceived by participants as a part of the experiment, but still it influenced their answers. We are aware of the fact that this experiment was just a first step to creating an accent intervention and there might be various explanations of its mechanisms and different processes additionally influencing the results. More research would be desired to further explore the mechanisms behind the obtained results. Future studies could also test how long-lasting are the effects of such intervention.

Although it was not a goal of our research, several results in different experiments suggest that people express their opinions about others based on their accents more freely than based on other's appearance. One result suggesting this, is a similar evaluation of German- and Turkish-looking candidates (based only on their appearance) but better evaluation of standard than Turkish-accented speakers (based only on their accents). Second result, observed in a demographically diverse sample, is influence of the motivation to respond without prejudice when evaluating faces. The higher was the motivation, the higher were the evaluations of Turkish-looking candidates. However, this was not the case when candidates' voices could be heard. Nowadays people try not to evaluate others based on their appearance, but there is no commonly known norm not to discriminate based on accents (Lippi-Green, 1997, 2012). Some countries' constitutions explicitly prohibit discrimination based on lan-

guage, but some do not and in the United States, for example, employers are allowed not to employ or fire an employee because of possible problems in communication (Gluszek & Hansen, 2012; Ng, 2007). Distinguishing between accent-based discrimination and objective problems in communication leading to inefficiency at work is very difficult and courts often rely on employers' subjective opinions to determine whether a person's accent is problematic (Lippi-Green, 1994).

Presented experiments showed how accents are strong social cues. They can be especially influential when unexpected and violating expectations based on a person's appearance. We arrived at such conclusions by using mainly psychological approach to the studied phenomena. However, one can look at the results and the methods used also from a more economic perspective.

## **5.2 Economic Perspective and Further Work in Progress**

### **5.2.1 Comparison of subjective and more objective measures**

Research has shown that peoples' evaluations on subjective measures may considerably differ from those made on more objective measures (Biernat, Manis, & Nelson, 1991; Campbell, Lewis, & Hunt, 1958). Therefore, in our experiments to an evaluative competence scale we asked whether a candidate should be hired (1 – *definitely not*, 7 – *definitely yes*) and what salary he should be offered. By such measures we tried to assess more objectively how probable it would be that a candidate was hired and how financially valued his work would be perceived.

To set some but not restrictive frames of possible salary we indicated that it should be between 2000€ and 4000€/month. Here we describe the results for different dependent measures on the example of Experiment 2a from Chapter 2. For simplicity and as we want to concentrate on the comparison of effects of different measures and less on changes between the first and the second measurement, we present the results only for the second measurement, where candidates could be both seen and heard.

Competence scale was highly correlated with recommendations to hire and, depending on the target type, Pearson's correlation coefficients ranged from  $r = .77^{**}$  to  $r = .82^{**}$  (see Figure 7). This indicates that participants, unsurprisingly, perceived competence as important at the job of a middle level manager and as a good indicator of whether the person should be employed or not. Correlations with suggested salary were moderately high and were in the range between  $r = .43^{**}$  and  $r = .59^{**}$ . Correlations of hiring recommendations with suggested salary were between  $r = .50^{**}$  and  $r = .59^{**}$ .

As ANOVA results showed, for the recommendation to hire the candidates, the accent was most important,  $F(1,56) = 14.27$ ,  $p < .001$ ,  $\eta_p^2 = .20$ , and standard-accented candidates were more likely to be hired ( $M = 4.33$ ,  $SD = 0.90$ ) than Turkish-accented candidates ( $M = 3.76$ ,  $SD = 0.93$ ). Neither candidates' appearance,  $F(1,56) = 2.63$ ,  $p = .11$ ,  $\eta_p^2 = .05$ , nor a combination of their appearance with their accent mattered,  $F(1,56) = 1.85$ ,  $p = .18$ ,  $\eta_p^2 = .03$ . However, although the interaction effect of appearance and accent was not significant, the simple main effects showed interesting patterns. As can be seen in Figure 7, although Turkish-looking standard-accented candidates were perceived as most competent, when it came to hiring they lost their relative advantage over German-looking standard-accented candidates,  $F < 1$ . At the same time, Turkish-looking Turkish-accented candidates gained an advantage and were more likely recommended to be hired than German-looking Turkish-accented candidates,  $F(1,56) = 4.57$ ,  $p = .04$ ,  $\eta_p^2 = .08$ . We do not have data that could clearly explain this result, but from some answers to open-ended questions and from the conversations with participants after the experiment, it appears that the mere fact that a Turkish-looking Turkish-accented person applied for a middle manager position, is perceived as a sign of high motivation and aspirations of this person. We do not have more solid data, but we can also examine whether the salary suggested for such candidates was also higher.

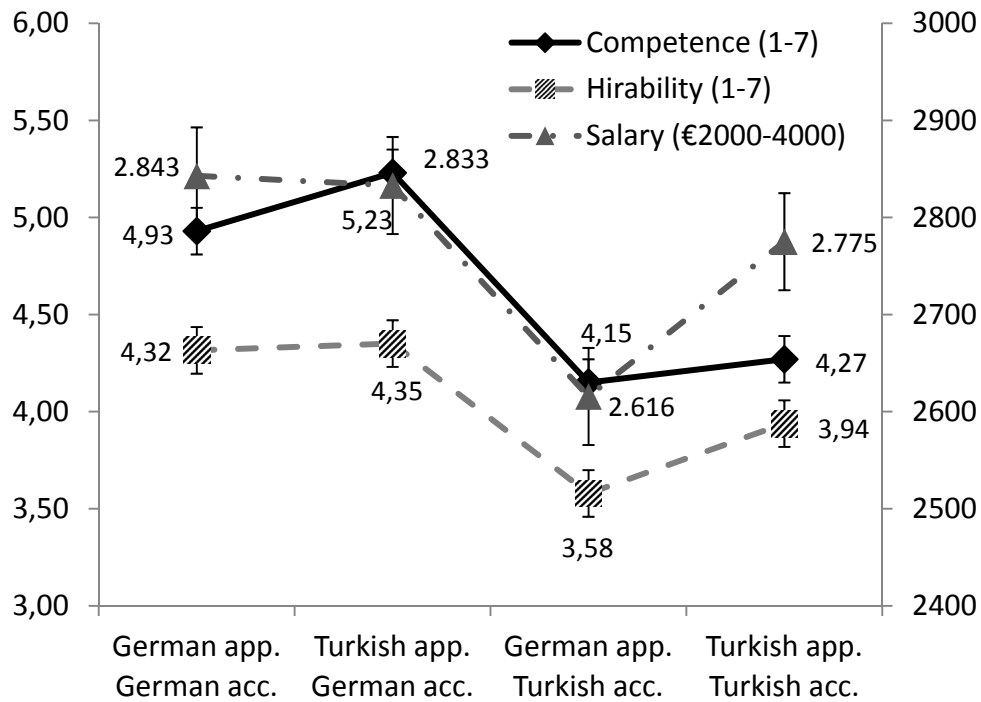


Figure 7. Comparison of mean competence, hirability, and suggested salary measures by target type. Error bars represent standard errors of the mean.

Similarly as for evaluations of candidates' competence (see Chapter 2), salary recommendation depended on the combination of how the candidates looked and how they spoke. Not only accent,  $F(1,56) = 6.44, p = .01, \eta_p^2 = .10$ , and appearance,  $F(1,56) = 3.93, p = .05, \eta_p^2 = .07$ , influenced the suggested salary, but most importantly their combination did,  $F(1,56) = 4.57, p = .04, \eta_p^2 = .08$ . Simple main effects showed that although the Turkish-looking standard-accented candidates were evaluated as most competent, they were not offered a higher salary than German-looking also standard-accented candidates,  $F < 1$ . Conversely, among the Turkish-accented candidates the Turkish-looking candidates, who were evaluated as similarly competent as the German-looking candidates, were offered a higher salary,  $F(1,56) = 9.42, p = .003, \eta_p^2 = .14$ . It seems that the Turkish-looking Turkish-accented candidates were rewarded both on the hirability

and on the salary measures compared to their perceived competence. For what they were rewarded remains an open question that could be addressed by future studies.

Other open question is why Turkish-looking candidates who positively surprised the evaluators by speaking with a standard accent and were perceived as the most competent, were not that much recognized when it came to hiring or salary recommendations. It might be presumed that on the salary measure we observed a ceiling effect. Although it seems improbable considering that the upper limit given was €4000, it might be that subjective limit for participants was about €3000. Other interpretation might be that participants thought that above some level of competence employees should not be differentiated anymore. Still another reason could be that although we asked "How much *should* this person be offered?" maybe participants considered that in reality a Turkish-looking person would not be offered more than a typical German-looking person and with their answers they just maintained this status quo. Future studies are needed to answer these questions. It could be advantageous to explore these questions with the high/low credentials approach (Dovidio & Gaertner, 2000).

More data is needed, but also the problem which emerges is what is a real "objective" measure? Although salary measure has an objective scale on which answers are given, why people decide on this or the other salary can, similarly as in the reality, have different reasons operating at the same time. To have better estimations of how objectively competent people perceive someone to be, *common rule measures* could be used (Biernat & Kobrynowicz, 1997; Biernat & Manis, 1994). These measures ask to estimate the frequency with which the target person would engage in specific behaviors, for example "Out of 10 possibilities how often does the candidate get the last word in an argument?", or consist of questions where a target person is evaluated as being on a specific place in a ranking, for example "This candidate's score on an intelligence test is in the top 10% of all candidates" (Bosak, Sczesny, & Eagly, 2012). However, in the real life, even if there are criteria for objective selection of candidates, also subjective impressions influence decisions who should be hired

or promoted, or how high someone's salary should be. Summarizing, it appears important to choose a most appropriate (regardless if objective or subjective) measure to the research questions and it can be advantageous to include different types of measures in a study.

### **5.2.2 Significance for economics and a work in progress**

Conducted experiments showed importance of considering both visual and auditory cues in processes of impression formation. Described processes and effects can occur in all settings where impressions of others are formed, like on the labor market in job interviews, or in promotion or wage decisions. They can also arise in the educational setting during oral exams, and in decisions on the housing market. Therefore, they have scientific and practical implications not only for psychology, but also for sociology, economics, and other disciplines. Awareness and better understanding of accent discrimination and of effects of violated expectations can help in a more objective recruitment decisions and in recognizing and mitigating possible discrimination among employees within a firm.

On the one hand preventing discriminations is desirable, but on the other hand, looking at the results of the experiments from a perspective of statistical discrimination (e.g., Phelps, 1972), it might also be rational to favor people with foreign appearance and standard accent and discriminate against people with nonstandard accents. Especially when people have little information about a specific person, they may infer about some characteristics of this person based on statistical knowledge about the group the person belongs to. However, it is not only illegal and harmful to discriminate people based on their ethnicity, but when inaccurate, it might be also costly for both parties. Our results go beyond simple group memberships and it is rather difficult to say, for example, what job-related skills have Turkish-looking people who speak standard German. It was even difficult for participants to indicate whether such person is German or not. Thus, it is rather improbable to have an accurate statistical knowledge about such people. In answers to open-ended questions only 2% of participants indicated that employing a Tur-

kish-looking standard-accented person might be advantageous as he might be bilingual and be socially competent in two cultures.

We do not directly know whether participants made some statistic-based assumptions about Turkish-looking standard-accented candidates. Based on our experiments we also do not know directly whether low competence ascriptions of Turkish- and regional-accented candidates were an expression of a taste-based, statistical, or error discrimination. However, some of our results suggest that observed discrimination was not purely taste-based. It was not simply an aversion to Turkish-looking people, because when they spoke standard German they were perceived as very competent. It might be that it was just a preference for standard over Turkish accent. However, hirability and salary ratings for Turkish-looking Turkish-accented job candidates were relatively high. Thus, it seems that it was not a pure distaste for people with Turkish appearance or accent. Regarding statistical versus error discrimination, we know that all voice recordings and photographs were of undergraduate or graduate students. Therefore, we can assume that their general level of competence was not low, but we do not know the differences between them, and also auditory and visual stimuli from different people were combined.

Although combining auditory and visual stimuli already gave a lot of socially relevant information about the target persons, it would be beneficial to study processes of impression formation and ethnic discrimination providing participants with more realistic stimuli. In our experiments we used pre-tested voice recordings and photographs of faces in order to assure that they were equally attractive and perceived as typical for their group. However, pictures of faces of some people were matched with voices of other people, which is obviously not realistic. Furthermore, participants were asked to imagine that the people they were presented with were job candidates, but decisions made by participants did not have any consequences for the presented people. Conclusions about validity of such studies could be made stronger by allowing for a real personal interaction between different people living in Germany and asking them for decisions that would be indeed implemented.



To attain the above mentioned goals we have designed and will be soon running a laboratory experiment where participants will interact with each other and have a real influence on each others' payments in the experiment. In the planned experiment participants with German ethnic origins and with Turkish and mixed origins<sup>4</sup> will be matched. The goal of the study is to examine levels of trust, eventual discrimination, and competence ascriptions indicated by participants with only German origins towards participants with Turkish and mixed origins. In the experiment participants will have a role of a sender or of a receiver. Participants in the receiver role might be discriminated against by the senders. As we are interested particularly in the discrimination of German-origins participants against Turkish- and mixed-origins participants, role of the senders will be ascribed only to German-origins participants. In order to have a comparison group, not only participants with Turkish (and mixed) but also with German origins will be in the role of the receivers.

The receivers will be shortly introduced to the senders by the means of a photograph, a voice recording, or both. The senders will need to decide how much money they want to transfer to Turkish- and German-origins receivers. In order to study different aspects of discrimination and also to disentangle between taste-based and information-based discrimination, different games will be used. We are interested whether the senders are trusting their Turkish-origins partners less than German-origins partners (statistical or error discrimination) and whether they are sharing with them the goods that they get less equally (less altruism, taste-based discrimination). The senders will also be asked to guess how well the receivers performed on a competence task. With this task it will be possible to see not on-

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<sup>4</sup> In order to most clearly understand different aspects and causes of discrimination, it would be best to have all different types of participants: speaking with a Turkish and with a standard accent, and looking clearly Turkish and German. In our experiment we are obviously limited to participants who will come to the laboratory. However, if there would be no specific self-selection problems, one could also see it as an advantage. For example, if in the population there are no German-looking Turkish-accented people, then it is more realistic not to have them as targets.

ly whether Turkish-origins participants are believed to perform worse, but thanks to the factual scores on the test, to disentangle if such belief, if present, reflects the reality (statistical discrimination) or is only a bias (error discrimination). The study will be a broad extension of the experiments described in this dissertation and it is expected to contribute to better understanding of the ethnic-based discrimination in an immigration context.

### **5.3 Methodological Considerations**

Combining visual and auditory information seems advantageous, but not to sacrifice the experimental control, needs a careful methodological planning. First, when using target persons to look for general effects like those of race or ethnicity, it is important to eliminate effects of specific characteristics of a single target person (for a discussion of the stimulus sampling problem, see Wells & Windschitl, 1999). This can be done in different ways. In many studies of accents influence of specific voice characteristics is equalized for all conditions by using a matched-guise method (Lambert, 1967). In this method the same (usually bilingual) person records voice samples speaking with different accents. This approach has its supporters and opponents (Grondelaers, van Hout, & Steegs, 2010), but besides of the possible criticism, it is not possible to easily do the same with appearance of people. Therefore, we used as stimuli different people, but to eliminate confounding effects of their different attractiveness or pleasantness, we pre-tested and carefully selected our stimuli (see Appendix A and B). To avoid influence of other specific characteristics of one chosen person, we used multiple targets for each target type so that every participant needed to evaluate a few job candidates, usually two to four of each type. Furthermore, the matching of faces and voices was randomized allowing for numerous possible combinations and a different set of targets for each participant. Using multiple target persons in a within-subject design has two more advantages. First, practically, it has more statistical power as an additional part of the variance is accounted for by knowing the individual response tendencies of each participant. Second, especially in a job interview context it is more realistic and

allows for comparing and contrasting the candidates. However, it also means that the specific sequence, in which the candidates are presented, can influence the relative perceptions of them. In order to alleviate such possible contrast effects, we randomized the sequence of presenting the targets.

Regarding methodology related to expectancy violations, in different experiments we tested various approaches to measuring the effects of expectancy violations. Starting our experiments (Chapter 2, Experiment 1) we used a traditional approach, where no baseline evaluations are assessed and only effects *after* the expectancy violating information are measured. Later (Chapter 2, Experiments 2a-2b), we measured a within-participant change in evaluations by first assessing baseline evaluations when only one piece of information was present, and later repeating the evaluations after the expectancy-violating information was added. This method might have its shortcoming in the form of demand effects, but it has also a big advantage because the differences in evaluations are then clearly caused by newly added information. Finally, to maintain the baseline comparison but eliminate potential confounds of presenting the stimuli for the second time, we used a mixed within-between-participants design where half of participants only saw the candidates and the other half both saw and heard them. Results obtained using different methods were similar and we replicated expectancy violations effects using all of these methods. However, different methods allow for drawing slightly different conclusions. A single measurement allows only for describing a *difference* between evaluations of different targets and a double measurement allows additionally for conclusions about a *change* in evaluations of each target.

Particularly the change measure is worth discussing as besides of the afore mentioned advantages it also has a potential of solving a problem of comparability of accent and appearance. As already mentioned earlier in this discussion, it might be said that choice of stimuli is an arbitrary decision of the researchers and does not reflect the social reality. To explore how our well controlled but not representative manipulations reflect the real distribution of accents and appearances in some population, a large sample of stimuli

could be collected and without selection included in an experiment. As noted earlier, social categories are not clear cut and do not cross each other at a 90° angle. Using a wide set of stimuli would reflect extending a distinction German-Turkish not only to a few more groups as in our experiments, but to an infinite number of individuals with their accents and appearance lying on a continuum between typically German and typically Turkish. With a double measurement method it would be possible to observe a change in evaluations of each of these targets and see which of those people and to what extent violate others' expectations. Comparisons of final evaluations with each other would be less clear than with pre-tested and selected stimuli, but it would be possible to see, for example, how much has a slightly Turkish-looking person gained when others heard him or her speaking standard German and how much has a typically Turkish-looking person gained after speaking German with only a very subtle Turkish accent.

#### **5.4 Limitations**

One limitation of the present research is that the results might depend on the cultural context where the study is conducted. It can matter whether the experiment is conducted in a monocultural or multicultural country, region, or city. In the case of the multicultural country it can matter whether the country has a long or short history of immigration and whether the ethnic groups of interest are rather separated or intermixed. The results might also depend on the characteristics and beliefs about a specific ethnic group. For example, due to stronger assimilation of Asian Americans than Latino Americans it might be that in the United States Asian-looking people would be expected to speak with a standard accent, but Latino-looking people to speak with a Spanish accent (Cottrell & Neuberg, 2005; Wilkinson, 2007). For our experiments as targets we chose Turks who are the biggest and the most prototypical immigrant group in Germany (Federal Ministry of the Interior, 2007). As our results are certainly strongly influenced by image that this group has in the society, we cannot generalize our findings to other groups, for example, Asians that are rather perceived to be competent and hard

working. Nevertheless, we think that the results can be seen as representing attitudes of ethnically German population to immigrants from the Middle East and (with necessary caution) probably also to other western societies that in the last decades received immigrants from various southern countries. Furthermore, specific cultural context might influence the results, but the mechanisms should stay the same: *If* from a Turkish-/Moroccan-/Indian- or German-/French-/American-looking person is expected to speak with a specific accent, but the person speaks with a different one, this can change the evaluations of this person.

Another possible limitation of generalizability of the results could be the used samples. As in many other psychological studies most of our participants were students from a western society, which obviously limits generalization of the results to whole human species (Henrich, Heine, & Norenzayan, 2010). However, for an experiment in a job interview setting, students of management, economics, and psychology seem to be appropriate participants as some of them might soon take part in evaluating job candidates, and some of them already did it (as a few told us after the experiment). Also, in the experiment that used standard and regional accents, we used a diverse non-student sample and the results replicated what we found with student samples.

## **5.5 Implications and Future Directions**

Results of the experiments presented in this dissertation most closely can have implications for job selection processes and other decisions on the level of organizations. Labor market discrimination may exist and continue because employers do not know with certainty candidates' abilities and may base their decisions on the future workers' features, such as group identity (cf. Phelps, 1972). However, a study in Sweden showed that (at least on the level of higher education) there were no differences in factual competence of standard and nonstandard speakers (Rödin & Özcan, 2011). Further studies should continue verifying it and studying how such biases could be prevented.

What can contribute to biased evaluations of some ethnic groups are behaviors leading to confirmation of one's expectations (Roese & Sherman, 2007). While viewing resumes of job candidates, a recruiter might concentrate on and look for different kinds of information. It would be interesting to study whether a recruiter would look for nationality, place of birth, and language proficiency in all resumes or only in those with foreign names. Also during the interview recruiters' expectations and attitudes can guide what questions they will ask. A possible area for future research may involve observing what information recruiters are checking first in resumes and what questions they are asking during an interview depending on majority- or minority-appearance or names of applicants.

Further research could also study who and why is employed. Relatively high (in comparison to competence) hirability ratings of Turkish-looking Turkish-accented candidates can be seen as a positive belief that the person is highly motivated if already applying for a middle manager position, but it can also be showing a phenomenon of tokenism. Tokens are members of minorities, discriminated or under-represented groups that are accepted to an advantaged group (Danaher & Branscombe, 2010; Wright & Taylor, 1999). They are often admitted to such groups not just because of their high competence and qualifications, but also to show that the company, society, or organization is not closed for members of any group. Such token people might help others from their group of provenience to enter a desired institution or group, but can also serve firms to dismiss accusations of inequity or intolerance, and to maintain unfair practices.

From a very practical point of view, our research has shown that immigrants would gain by learning how to speak with a standard German accent (but not with a dialect accent). Furthermore, studies in the first line of research where sequence effects were measured showed that, practically speaking, Turkish-looking standard speakers will be evaluated much more positively if seen first, rather than heard first. It can be therefore important for such people that they, for instance, first send their resume or a photograph and later call or come personally rather than first call and then meet in person. It is interesting and worth to consider such effects, but we

think that instead of creating such strategies, the role of the prejudiced listeners should be also stressed. Our intervention experiment addressed this problem and showed how discrimination of accented speakers can be prevented. Further studies are needed in order to understand better the mechanisms of accent discrimination and how this discrimination can be prevented.

## **5.6 Conclusions**

This dissertation explored people's evaluations of others based on visual and auditory cues to their ethnicity. It was shown that a combination of how people look and with what accent they speak can be very important for impressions made of them by others. In the case of people who speak in a surprising way to how they look, the expectations based on their appearance played a crucial role in evaluations. After expecting something negative (based on a Turkish-appearance) but perceiving something positive (standard accent) impression of the person was very positive. The experiments have also shown that the influence of accent on forming impressions of others was stronger than of appearance. It is important to include both types of stimuli when studying perceptions of different ethnic groups. Auditory information, which is present in most every day encounters, should not be ignored. We also showed that biased evaluations of foreign-accented speakers can be prevented by making the evaluators experience themselves speaking in a foreign language. Such approach shifts part of the attention from the accent as a problem for the accented speaker to the responsibility of the prejudiced listener.

The times are changing, people are intensively moving around the globe, and thanks to the Internet and telecommunication technologies companies are hiring employees in call centres all around the world. The number of live and computer-mediated encounters of people of different appearances and speaking with different accents will be certainly increasing. Maybe after centuries the mixture of appearances and accents will be so big that it will not be diagnostic of group membership anymore and our research will become useless. However, looking at the human history it seems rather unlikely and,

most importantly, today appearance and accent are still strong social cues and their combined influence on others' impressions and behaviors should be further studied.



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## Appendix

### Appendix A: Pre-Test and Selection of Stimulus Materials – Chapter 2 and 4

To avoid the “what is beautiful is good” phenomenon (Dion et al., 1972; Zuckerman & Driver, 1989) all stimuli were pre-tested for attractiveness and pleasantness. Moreover, research shows that linguistically naive persons can reliably rate varying degrees of accent strength, and the stronger the accent, the more negative the evaluations (Ryan, Carranza, & Moffie, 1977). Therefore, audio stimuli were also pre-tested for accent strength. Additionally, perceived typicality of targets for the groups of interest was assessed by asking (in two separate questions) how typically German and how typically Turkish the targets appeared.

We conducted one pre-test, but drew two sets of stimuli from it: one set of stimuli for Experiment 1 and another set for Experiments 2a and 2b. The pre-test was conducted as a separate, independent study with participants who did not participate in any of our main experiments but were from the same population. The pre-test sample included 31 undergraduates. Excluding one participant who was not a native German speaker and one who gave the same answers for all targets, the final sample consisted of 29 participants (13 men,  $M_{\text{age}} = 22.73$ ,  $SD = 3.42$ ).

Participants sat individually in front of computer screens and were presented with two blocks of stimuli. In one block they saw faces; in the other one they heard voices. After each face or voice, participants answered questions about its attractiveness, pleasantness, and typicality, on 7-point scales ranging from 1 – *not at all* to 7 – *very much*. Both the stimuli and the subsequent questions appeared in random order. Voices were also evaluated regarding their accent strength (1 – *no accent at all* to 7 – *very strong accent*).

## Faces

We used portrait photographs of faces available in two online scientific databases (Langner et al., 2010; Minear & Park, 2004) and we added several photographs of Turkish people which we took ourselves. We selected 36 photographs of faces for pre-testing (21 Turkish-looking, 15 German-looking). The format of the pictures was standardized and they were all converted into black and white. All photographs were of young males with a neutral facial expression, dressed neutrally, without glasses, with a neutral modern haircut, and who did not have any stereotypical characteristics (e.g., no long moustache for Turkish targets).

From the pre-tested faces, for Experiment 1 we selected three, for Experiment 2 four, German- and Turkish-looking faces which were moderately attractive and pleasant (descriptive statistics can be found in Table A1). The selected faces were similarly attractive both in Experiment 1,  $t(28) = 1.86, p = .07^5$ , and in Experiment 2,  $t < 1$ . They were also similarly pleasant [Exp. 1:  $t(28) = 1.27, p = .21$ ; Exp. 2:  $t < 1$ ]. German faces were much more typically German than Turkish [Exp. 1:  $t(28) = 15.95, p < .001$ ; Exp. 2:  $t(28) = 14.65, p < .001$ ]. Analogously, Turkish faces were more typically Turkish than German [Exp. 1:  $t(28) = -6.01, p < .001$ ; Exp. 2:  $t(28) = -8.29, p < .001$ ].

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<sup>5</sup> One might worry that in Experiment 1 Turkish-looking faces were descriptively less attractive than German-looking faces. However, Turkish-looking targets speaking standard German were perceived as most competent but at the same time Turkish-looking targets who spoke with a Turkish accent were perceived as least competent. Therefore, influence of accent was evident and the descriptive difference in facial attractiveness of targets cannot account for the findings.

Table A1

*Descriptive Statistics of German (Ger.) and Turkish (Turk.) Faces Selected for Experiment 1 and Experiments 2a-b in Chapter 2.*

	Experiment 1				Experiment 2a-2b			
	$M_{Ger.}$	$SD_{Ger.}$	$M_{Turk.}$	$SD_{Turk.}$	$M_{Ger.}$	$SD_{Ger.}$	$M_{Turk.}$	$SD_{Turk.}$
Attractiveness	3.18	1.21	2.82	1.04	3.02	1.14	2.97	1.05
Pleasantness	4.47	0.89	4.14	1.05	4.47	0.89	4.14	1.05
Typical Ger.	5.33	1.29	1.62	0.70	5.33	1.28	2.27	0.73
Typical Turk.	1.34	0.47	3.66	1.71	1.34	0.53	4.36	1.24

### Voices

Short voice samples of young Turkish and German native speakers were recorded. The speakers said a neutral phrase, “Good morning. Nice to meet you.”<sup>6</sup> which can be heard in many everyday situations. By having all speakers say the same sentence any influence of content of the statement was excluded and it also ensured that accented sentences were not more difficult to understand. The speakers were briefly trained and several versions were recorded of each speaker. Speech rate was kept constant; all the speakers said the statements at a medium speed so that the voice samples were three seconds long. All speakers had a typical male timbre of voice. We selected 25 voices for pre-testing (11 Turkish, 14 German).

Similarly to faces, from the pre-tested voices for Experiment 1 we selected three, and for Experiment 2 four, German and Turkish voices that were moderately attractive and pleasant (Table A2). The voices were similarly attractive [Exp. 1:  $t < 1$ , Exp. 2:  $t < 1$ ] and similarly pleasant [Exp. 1:  $t < 1$ ; Exp. 2:  $t < 1$ ]. German voices were much more typically German than Turkish [Exp. 1:  $t(28) = 7.63$ ,  $p < .001$ ; Exp. 2:  $t(28) = 14.65$ ,  $p < .001$ ], and Turkish voices were more typically Turkish than German [Exp. 1:  $t(28) = -5.70$ ,  $p < .001$ ; Exp. 2:  $t(28) = -8.29$ ,  $p < .001$ ]. German speakers were perceived to speak with no accent and Turkish speakers to speak with a moderately strong accent. The difference in accent strength between German and Turkish

<sup>6</sup> In German: “Guten Tag. Es freut mich, dass wir uns kennen lernen.”

speakers was significant [Exp. 1:  $t(28) = -13.22, p < .001$ ; Exp. 2:  $t(28) = -17.21, p < .001$ ], ensuring an effective manipulation.

Table A2

*Descriptive Statistics of German (Ger.) and Turkish (Turk.) Voices Selected for Experiment 1 and Experiments 2a-b in Chapter 2.*

	Experiment 1				Experiment 2a-2b			
	$M_{Ger.}$	$SD_{Ger.}$	$M_{Turk.}$	$SD_{Turk.}$	$M_{Ger.}$	$SD_{Ger.}$	$M_{Turk.}$	$SD_{Turk.}$
Attractiveness	3.44	1.36	3.21	1.38	3.24	1.32	3.09	1.00
Pleasantness	4.61	1.14	4.52	0.89	4.20	1.02	4.21	0.71
Typical Ger.	4.80	1.64	1.49	0.82	5.30	1.28	2.27	0.7
Typical Turk.	1.61	0.92	3.20	1.52	1.34	0.53	4.36	1.24
Accent strength	1.63	0.84	4.85	1.14	1.30	0.52	4.80	1.16

## Appendix B: Pre-Tests and Selection of Stimulus Materials – Chapter 3

Similarly as in experiments in Chapter 2, all stimuli were pre-tested for attractiveness and pleasantness. A new set of pictures of faces was selected from the stimuli pre-tested for experiments in Chapter 2, but regional-accented voice samples were recorded specifically for this experiment and a new pre-test was conducted.

### Faces

From the set of 36 earlier pre-tested faces, we selected two German- and two Turkish-looking faces, which were moderately attractive and pleasant (descriptive statistics can be found in Table B1). The selected faces were similarly attractive,  $t < 1$ , and similarly pleasant,  $t < 1$ . German faces were much more typically German than Turkish,  $t(28) = 12.86$ ,  $p < .001$ , and Turkish faces were more typically Turkish than German,  $t(28) = -9.06$ ,  $p < .001$ . We also chose one additional filler German face, whose later evaluations were not included in the analyses.

Table B1

*Descriptive Statistics of Faces Selected for the Experiment in Chapter 3.*

	Faces			
	$M_{\text{German}}$	$SD_{\text{German}}$	$M_{\text{Turkish}}$	$SD_{\text{Turkish}}$
Attractiveness	3.40	1.40	3.38	1.15
Pleasantness	4.26	1.01	4.24	1.00
Typical German	5.17	1.37	1.86	0.83
Typical Turkish	1.55	0.65	4.91	1.46

### Voices

The voices pre-test sample included 41 undergraduates. Excluding three participant who were not native German speakers, the final sample consisted of 38 participants (19 men,  $M_{\text{age}} = 22.11$ ,  $SD = 3.52$ ).

From a bigger set of recordings we chose eight voices for pre-testing: four aimed to be standard German and four with a Saxon accent. Similarly as in pre-tests for experiments in Chapter 2, for each voice participants answered questions about its attractiveness, pleasantness, German typicality, and accent strength. We also asked how the voices sounded (as *from Bavaria, from Brandenburg, from Saxony, other region, no regional accent*).

From the pre-tested voices we selected two standard- and two Saxon-accented voices (Table B2). The voices were similarly attractive,  $t < 1$ , and similarly pleasant,  $t < 1$ . Standard-accented voices were perceived to speak with no accent and Saxon-accented voices to speak with a moderately strong accent. The difference in accent strength between standard and Saxon voices was significant,  $t(37) = -12.67$ ,  $p < .001$ , ensuring an effective manipulation. Saxon-accented voices were perceived by majority (53%) of participants to come from Saxony, meaning that they were correctly recognized (18% indicated neighboring Brandenburg, 22% other region, 7% no accent). We also chose one additional filler standard German voice.

Table B2

*Descriptive Statistics of Voices Selected for the Experiment in Chapter 3.*

	Voices			
	$M_{\text{German}}$	$SD_{\text{German}}$	$M_{\text{Saxon}}$	$SD_{\text{Saxon}}$
Attractiveness	3.54	1.09	3.62	1.29
Pleasantness	4.25	1.01	4.38	1.03
Accent strength	1.84	1.10	4.42	1.19

## Summary

When we get to know someone, we instantly form an impression of this person (e.g., Ambady, Bernieri, & Richeson, 2000). It can be based on many different cues, among them the appearance and voice of this person. From these cues we very quickly perceive the person's gender and age, and we might infer about this person's ethnicity (e.g., Giles & Johnson, 1981). In such impressions and inferences one very strong social cue is accent. However, although the influence of accents (and dialects) on impression formation has been studied in the fields of sociolinguistics, second language acquisition, and social psychology for decades (Giles & Coupland, 1991; Giles & Marlow, 2011; Lambert, 1967), accents have not received nearly the same attention in the literature as visual cues to gender, race, and ethnicity have (Gluszek & Dovidio, 2010).

Other's accent or appearance can confirm our expectations to their ethnicity, but can also surprise us. For example, in Germany one might be surprised hearing a typically Turkish-looking person speak standard German or even German with a Saxon dialect. As expectancy violation theory (Burgoon & Jones, 1976) states, because of such surprise people might evaluate the surprising others extremely: Extremely well when the surprise is positive or extremely badly when it is negative. In the times of globalization and related to it increased migrations and ethnical diversity, encounters with people whose accents are surprising will be increasingly frequent. However, impressions made by such people have not been studied, and the influence of accents and appearance was (with a few exceptions) examined separately, not allowing for interactions between these cues.

Thus, the goal of this dissertation was to examine the combined influence of appearance and accent cues on social categorization and impression formation. We also aimed at contributing to the expectancy violation theory with a new methodological and conceptual approach to expectancy violations. With our experiments we also expected to support the literature, which shows that accents are

important social cues. Finally, we wanted not only to show how accent can strongly influence impressions, but also to find a way to prevent biased evaluations of accented speakers.

These goals were realized in three lines of research. The experiments in the first line of research aimed at investigating impressions made by people with native (German) and nonnative (Turkish) appearance and accents. Based on expectancy violations theory, we predicted that incongruent targets (e.g., Turkish appearance/German accent) would violate participants' expectations, which would lead to extreme evaluations. The second line of research aimed at examining combinations of German and Turkish appearance with a standard accent and a native but nonstandard Saxon regional dialect. Finally, the third line of research tested an intervention preventing negative evaluations of nonstandard speakers.

Results of all experiments showed a strong influence of targets' accents on perceptions of their competence. In the first and the second line of research appearance information was contrasted with accent information and accents showed stronger effects than appearance. Furthermore, results showed that incongruent targets violated participants' expectations, which led to more extreme evaluations. Specifically, in all experiments that contained such targets, Turkish-looking targets who spoke with a German accent positively violated participants' negative expectations, and were evaluated as more competent than German-looking targets who spoke with a German accent. Furthermore, the first line of research presented a new approach to expectancy violations by assessing not only differences in final evaluations between different targets, but by also showing initial evaluations of targets and how their evaluations changed after adding an expectancy-violating piece of information.

The second line of research replicated the effect of positive expectancy violations with a different experimental design and using a big and diverse sample. It also extended the scope of the research to regional accents. In one experiment especially surprising targets were presented: They looked Turkish and spoke with a regional Saxon dialect. The results showed that job candidates speaking with a negatively perceived regional accent were, regardless if they were



German- or Turkish-looking, perceived as less competent than standard speakers.

Finally, the third line of research showed that bias toward accented speakers can be prevented by putting the evaluators in the shoes of the targets. German participants in the control group discriminated Turkish-accented speakers. Participants in the experimental group needed to speak English before the experiment. Consequently, they evaluated nonstandard speakers as similarly competent as standard speakers. Demand effects could not account for the findings, as participants did not perceive the conversation as part of the experiment.

Overall, the present research supports expectancy violation theory and shows how are evaluated people who speak in a surprising way to how they look. The results contribute to the literature showing that language and accent are important social cues. The presented findings have implications for research on impression formation, by showing that bringing together visual and auditory information allows for interactions between them and yields a more complete picture of the processes underlying impression formation. Finally, this research not only shows the strength of accent as a cue for evaluating others, but it also proposes a way to prevent bias towards nonstandard speakers.

## Zusammenfassung

Wenn wir jemanden kennenlernen, dann bilden wir uns unverzüglich einen Eindruck von dieser Person (z.B. Ambady, Bernieri, & Richeson, 2000). Dies kann auf der Basis unterschiedlicher Hinweisreize passieren, zu denen das Aussehen und die Stimme der betrachteten Person zählen. Aus diesen Hinweisreizen schließen wir sehr schnell auf das Geschlecht und das Alter der Person und stellen Vermutungen über ihre Ethnizität an (z.B. Giles & Johnson, 1981). Ein sehr starker sozialer Hinweis, welcher sich in diesen Eindrücken und Schlussfolgerungen widerspiegelt, ist der Akzent (bzw. Dialekt) der Sprache. Obwohl der Einfluss von Akzenten auf Eindrucksbildungsprozesse bereits seit Jahrzehnten in den Bereichen der Soziolinguistik, im Zweitsprachenerwerb und der Sozialpsychologie untersucht wurde (Giles & Coupland, 1991; Giles & Marlow, 2011; Lambert, 1967), fand die Untersuchung von Akzenten in der bisherigen Forschung nicht annähernd die gleiche Beachtung, wie sie visuellen Hinweisreizen auf das Geschlecht, die Rasse und die Ethnizität zukam (Gluszek & Dovidio, 2010).

Der Akzent anderer kann unsere Erwartungen über deren Ethnizität bestätigen, er kann uns aber auch überraschen. Beispielsweise könnte man in Deutschland überrascht sein, wenn eine Person mit typisch türkischem Aussehen ein akzentfreies Deutsch oder sogar Deutsch mit einem sächsischen Dialekt spricht. Die Theorie der Verletzung von Erwartungen (Burgoon & Jones, 1976) besagt, dass Personen aufgrund dieser Überraschung den Anderen extremer einschätzen: Besonders positiv, wenn die Überraschung positiv ist, oder besonders negativ, wenn sie negativ ist. In Zeiten der Globalisierung und der damit verbundenen Zunahme an Migration und ethnischer Vielfalt werden auch Begegnungen mit Menschen immer häufiger, die im Hinblick auf ihre Akzente überraschend sind. Dennoch wurden die Eindrücke, die diese Menschen hinterlassen, noch nicht untersucht. So wurde mit wenigen Ausnahmen auch der Einfluss von Akzent und Aussehen bisher meist nur getrennt voneinander unter-

sucht, wobei eine mögliche Interaktion zwischen diesen sozialen Hinweisreizen unbetrachtet blieb.

Aus diesem Grund war die Untersuchung des kombinierten Einflusses von Aussehen und Akzent auf soziale Kategorisierung und die Eindrucksbildung das Ziel der vorliegenden Dissertation. Wir zielten auch darauf ab, mit neuen methodischen und konzeptuellen Herangehensweisen einen Beitrag zur Theorie der Verletzung von Erwartungen zu leisten. Mit unseren Experimenten wollten wir auch die Theorien stützen, die annehmen, dass Akzente wichtige soziale Hinweisreize sind. Schließlich wollten wir nicht nur zeigen, dass Akzente einen starken Einfluss auf die Eindrucksbildung haben, sondern auch einen Weg finden, negative Einschätzungen von Personen, welche mit einem Akzent sprechen, zu verhindern.

Diese Ziele wurden in drei Serien von Experimenten verfolgt. Die Experimente der ersten Serie zielten darauf ab, die Eindrücke zu untersuchen, welche von Personen mit einheimischem (deutschem) und ausländischem (türkischem) Aussehen beziehungsweise Akzent hervorgerufen werden. Basierend auf der Theorie der Verletzung von Erwartungen nahmen wir an, dass inkongruente Zielpersonen (z.B. türkisches Aussehen/deutscher Akzent) die Erwartungen der Versuchspersonen verletzen würden, was zu extremen Bewertungen führen sollte. Die zweite Serie von Experimenten zielte auf die Untersuchung einer Kombination aus deutschem oder türkischem Aussehen mit hochdeutscher Sprache oder sächsischem Dialekt ab. Schließlich testete die dritte Serie die Wirkung einer Intervention, die negative Einschätzungen gegenüber den als überraschend wahrgenommenen Personen verhindern sollte.

Die Ergebnisse aller Experimente zeigten, dass die Akzente der Zielpersonen einen starken Einfluss auf die Erwartungen hinsichtlich ihrer Kompetenz hatten. In der ersten und zweiten Experimentalserie wurden die Informationen zum Erscheinungsbild mit den Informationen zum Akzent kontrastiert, wobei der Akzent einen stärkeren Einfluss als das Erscheinungsbild hatte. Darüber hinaus zeigten die Ergebnisse, dass inkongruente Zielpersonen die Erwartungen der Versuchspersonen verletzten, was zu extremeren Einschätzungen führte. Im Speziellen zeigte sich in allen Experimenten,

die entsprechende Zielpersonen beinhalteten, dass türkisch aussehende Menschen mit deutschem Akzent die negativen Erwartungen der Versuchspersonen positiv verletzten und als kompetenter eingeschätzt wurden als deutsch aussehende Zielpersonen, die ebenfalls mit deutschem Akzent sprachen. Darüber hinaus präsentiert die erste Forschungsreihe eine neue Herangehensweise an Erwartungsverletzungen. Es werden nicht nur die Unterschiede in der Gesamteinschätzung zwischen verschiedenen Zielpersonen bewertet, sondern auch anfängliche Bewertung der Zielpersonen gezeigt und wie sich deren Bewertung ändert, nachdem erwartungsverletzende Informationen hinzugefügt wurden.

Die zweite Experimentalserie replizierte den Effekt der positiven Verletzung der Erwartung mit einem anderen experimentellen Design und unter Verwendung einer großen und inhomogenen Stichprobe. Sie erweiterte auch die Forschungsfrage durch Einbeziehung regionaler Dialekte. In einem Experiment wurden besonders überraschende Zielpersonen präsentiert: Sie sahen typisch türkisches aus und sprachen mit sächsischem Dialekt. Die Ergebnisse zeigten, dass Bewerber mit negativ wahrgenommenem Dialekt, ungeachtet ihres deutschen oder türkischen Aussehens, als weniger kompetent eingeschätzt wurden als Menschen ohne regionale Sprachfärbung.

Schließlich zeigte die dritte Experimentalserie, dass Diskriminierung der Sprecher mit einem Akzent verhindert werden kann, wenn die Versuchspersonen vorher in die Lage der Zielpersonen versetzt werden. Deutsche Versuchspersonen in der Kontrollgruppe diskriminierten Sprecher mit türkischem Akzent hinsichtlich ihrer Kompetenzeinschätzung, wie oben bereits gezeigt. Die Versuchsteilnehmer in der Experimentalgruppe mussten vor dem Experiment Englisch sprechen. Danach schätzten sie Personen mit einem Akzent ähnlich kompetent ein wie hochdeutsch sprechende Personen. Effekte der sozialen Erwünschtheit konnten ausgeschlossen werden, da die Personen die englische Konversation nicht als einen Teil des Experiments wahrnahmen.

Zusammenfassend stützen die Ergebnisse der vorliegenden Dissertation die Theorie der Verletzung von Erwartungen und zeigen, wie Personen eingeschätzt werden, die im Verhältnis zu ihrem Aussehen

in unerwarteter Art und Weise sprechen. Die Ergebnisse leisten einen Beitrag zu den Theorien, die Sprache, Akzente und Dialekte als wichtige soziale Hinweisreize hervorheben. Die vorliegenden Erkenntnisse haben Implikationen für Forschung zur Eindrucksbildung. Sie zeigen, dass das Zusammenbringen von akustischen und visuellen Informationen die Interaktionsprozesse zwischen ihnen sichtbar macht und damit ein vollständigeres Bild der zugrundeliegenden Prozesse der Eindrucksbildung liefert. Schließlich belegt diese Dissertation nicht nur die Bedeutung von Akzenten als Hinweisreize für Bewertungsprozesse, sie zeigt darüber hinaus auch einen Weg auf, Diskriminierung von Sprechern mit Akzent zu verhindern.

## Ehrenwörtliche Erklärung

Hiermit erkläre ich, dass mir die Promotionsordnung der Fakultät für Sozial- und Verhaltenswissenschaften an der Friedrich-Schiller-Universität Jena bekannt ist.

Weiterhin erkläre ich, dass ich die vorliegende Dissertation selbst und ohne unzulässige Hilfe Dritter angefertigt habe. Alle von mir benutzten Hilfsmittel, persönliche Mitteilungen und Quellen sind in der Arbeit angegeben.

Bei der Sammlung des Materials, der Durchführung der Studie, sowie der Herstellung des Manuskripts haben mir nachstehend aufgeführte Personen in der jeweils beschriebenen Weise geholfen:

1. Claudia Niedlich in ihrer Funktion als studentische Hilfskraft hat mich bei der Datenerhebung und bei den Übersetzungen und sprachlichen Korrekturen der Untersuchungsmaterialien für mehrere Experimente, sowie bei den Stimmaufnahmen für das Experiment in Kapitel 3 unterstützt.
2. Cindy Littwitz, eine Studentin aus meinem Seminar, hat mir unentgeltlich bei der Datenerhebung für die Experimente in Kapitel 3 und 4 geholfen.
3. Bianca Heilmann, deren BA-Arbeit ich betreue, hat mir unentgeltlich bei der Datenerhebung für das Experiment in Kapitel 3 geholfen.
4. Agata Gluszek korrigierte unentgeltlich die englische Ausdrucksweise in Kapitel 2 dieser Arbeit.

Weitere Personen waren an der inhaltlich-materiellen Erstellung der Arbeit nicht beteiligt. Insbesondere habe ich hierfür nicht die Hilfe eines Promotionsberaters in Anspruch genommen und Dritte haben weder unmittelbar noch mittelbar geldwerte Leistungen von mir für Arbeiten erhalten, die im Zusammenhang mit dem Inhalt der vorgelegten Dissertation stehen.

Die Arbeit wurde weder im In- noch im Ausland in gleicher oder ähnlicher Form einer anderen Prüfungsbehörde vorgelegt. Ich habe weder früher noch gegenwärtig an einer anderen Hochschule eine Dissertation eingereicht.

Ich versichere, dass ich nach bestem Wissen und Gewissen die Wahrheit gesagt habe und nichts verschwiegen habe.

Jena, den 18.06.2012

Karolina Hansen