Responses to Racial and Ethnic Discrimination –

A Study Examining Indigenous People in Australia and Chile

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Abstract

The present work examines responses to racial and ethnic discrimination (RED) in indigenous peoples of Australia and Chile. The TRAM-model, a structural circumplex distinguishing four basic response styles, is postulated. The characteristic facets of the model are operationalized by the RDQ, a new psychometric scale that was applied in four empirical studies in the process of this investigation: In the stage of test development, data were collected from Australian Aborigines for the pretest (N=8) and the construction study (N=101). To determine the psychometric properties of the RDQ, the resulted final version of the scale was applied to a sample of Australian Aborigines (N=127). Finally, the RDQ was translated into Castilian and applied to a sample of Chilean Mapuches (N=179). Results indicate that the RDQ allows a valid measurement of the four proposed response styles to RED. Reliability assessment remained insufficient and, thus, needs to be addressed in further investigations. Implications for research concerning perceived discrimination, psychological stress, and psychological well-being are discussed.

Zusammenfassung

Die vorgelegte Arbeit untersucht die Reaktionen auf rassische und ethnische Diskriminierung (RED) in indigenen Völkern Australiens und Chiles. Das TRAM-Model, ein struktureller Zirkumplex, der vier grundlegende Reaktionsstile unterscheidet, wird postuliert. Die im TRAM-Modell verarbeiteten Merkmalsfacetten werden durch den RDQ operationalisiert, der eine neuartige psychometrische Skala darstellt und im Untersuchungsvorhaben vier empirische Studien durchläuft: Für die Testentwicklung wurden in einem Vortest (N = 8) und einer Konstruktionsstudie (N = 101) Daten von australischen Aborigines erhoben. Aus der resultierenden Fragebogen-Endversion wurden die psychometrischen Eigenschaften des RDQ ermittelt, für die jeweils Stichproben von australischen Aborigines (N = 127) und – in einer ins Kastellanische übersetzten Fragebogenversion – von Chilenischen Mapuche (N = 179) rekrutiert wurden. Die Ergebnisse weisen darauf hin, dass der RDQ ein valides Messinstrument der vier postulierten Reaktionsstile auf RED darstellt. Die Reliabilitätsprüfung blieb unzureichend und wird Bestandteil weiterer Untersuchungen sein. Die Bedeutung für Forschungsergebnisse und –vorhaben in den Bereichen wahrgenommene Diskriminierung, psychologischer Stress und psychisches Wohlbefinden werden diskutiert.

Resumen

La tésis presentada examina respuestas frente de la discriminación racial y étnica (DRE) en pueblas indígenas de Australia y Chile. El modelo TRAM, un circumplejo estructural, que distingue cuatro estilos de respuestas básicas, está postulado. Las facetas características del TRAM están operacionalicadas a través del RDQ, una nueva escala psicométrica, que – en el proceso de investigación – ésta aplicada en cuatro estudios empíricos: Por el desarrollo de la escala, los datos de aborígines australianos fueron recopilados en un prétest (N = 8) y un estudio de construcción (N = 101). Desde la versión final, las propiedades psicométricas fueron comprobadas, para la que se quita una muestra de aborígines australianos (N = 127) y traducido en una encuesta en castellano para los Mapuches chilenos (N = 179). Los resultados indican, que el RDQ permite la medida valida de los cuatro estilos de respuestas postulados frente de la DRE. El análisis de la reliabilidad mantuvo insufficiente y será un objectivo de investigaciones seguidas. El significado para investigaciones con respeto a la discriminación percibida, el estrés psicológico y el bienestar psíquico será discutido.

TABLE OF CONTENTS

LIST OF TABLES, FIGURES, AND APPENDIXES

Tables

Figures

Appendixes

ABBREVIATIONS

abbr.	abbreviation
approx.	approximately
M.G.	Mildred Girndt (author)
NT	Northern Territory (territorial state in Australia)
RED	racial and ethnic discrimination
resp.	respectively
spec.	specifically
VIC	Victoria (federal state in Australia)
€	Euro
$A	Australian Dollar

PREFACE

The presented research project examines responses to racial and ethnic discrimination (RED) in indigenous peoples. Previous research has indicated that RED continues to be a frequent experience in minority group members in Australia and Chile (Mellor, 2003; Merino, Mellor, Saiz, & Quilaqueo, 2009), the two nations, in which the investigations to this project took place. However, only few researchers have pursued the question, how the targeted individuals respond to discrimination: Consequently, an integrative conceptual framework is missing, but also systematic assessment of responses to RED by reliable and validated psychometric instruments is limited, as only few scales with a narrow conceptual focus exist. The conceptual and diagnostic deficiency is most pronounced in the context of indigenous groups in countries of previous European colonization, who have rarely been the subjects of systematic psychological investigations.

To address the outlined shortages, the present investigation aimed on three issues: 1) The development of a hypothetical model of responses to RED, 2) the development of a psychometric scale that is based on that model, and 3) the validation of the new scale. Correspondingly, a conceptual model – the TRAM[1]-model – is postulated that organizes particular previously extracted facets within a conceptual circumplex to distinguish four response styles to RED in indigenous minority groups. The Responses to Racial and Ethnic Discrimination Questionnaire (RDQ) is then developed that operationalizes the proposed facets of responses to discrimination. The scale is afterwards validated in indigenous groups of Australia and Chile.

It is expected that this research project will broaden the scientific understanding of indigenous minority members' responses to discrimination. Many researchers have criticized the historical focus on dominant social groups relative to minority groups in social psychological research, and labelled this general trend somewhat drastically the "psychology of the powerful" (Branscombe, Schmitt, & Harvey, 1999, p. 135). With its focus on minority groups, this dissertation contributes to dissolving this deficiency from the discipline. Future researchers can benefit not only from an unprecedented and integrative theoretical approach, but also from a new psychometric instrument to measure responses to discrimination.

The dissertation is subdivided into two main parts: The theoretical sections, first, introduce the conceptual background of the topic under study. A terminological discussion is followed by the presentation of major approaches and findings to the field of responses to discrimination in minority groups. The methodological considerations that preceded the empirical work – specifically topics arising in the context of cross-cultural research – are then elaborated. The theoretical part is con-

[1] TRAM represents an acronym of four proposed response styles to discrimination in the conceptual model, the Traditionalist style, the Revulsionist style, the Assimilationist style, and the Marginalist style.

cluded by an evaluation of present approaches and, finally, the presentation of the TRAM-model. A bridge towards the empirical section is constructed in the final chapter, in which the objectives and hypotheses of the empirical investigation are clarified.

In the subsequent empirical sections, the four stages of development and validation of the RDQ are presented, each containing chapters about the applied method, results, and a methodological discussion. Finally, a general discussion broadly debates implications derived from the investigation, including methodological suggestions for follow-up projects, limitations of the study originating from the situational context, and questions that remain unanswered or evolved in the course of this work, and that are encouraged to be addressed in upcoming scientific investigations.

INTRODUCTION

1. Racial and ethnic discrimination

This first section aims to provide a general frame for the study of racial and ethnic discrimination (RED). The topics covered can be superscribed with the terms definition, contextualization, and integration. The definition part provides a conceptual foundation by introducing the basic terminology and some central theoretical approaches within the field. The subsequent chapter contextualizes the subject of study by presenting the current situation for indigenous minorities in Australia and Chile. The third chapter integrates the previous parts to define the subject of the study, and to clarify the stance adopted to approach the subject.

1.1 Defining central concepts

It appears useful to a priori define and differentiate central concepts related to the scientific field of RED to specify the conceptual basis, and to justify the denotation that was chosen to circumscribe the focus of the research work presented here.

A first focus is laid on the distinction between the terms *racial* and *ethnic* as they appear as the defining adjectives in the title of the dissertation. Both imply a linguistic and conceptual relation to the prominent nouns *race* and *ethnicity* that are consistently used to define cultural differences. The scientific idea of race, a concept to categorize human groups on the basis of biological "natural" differences as we still understand it today, was anchored in European thinking since the late 18th century (Miles, 1995, p. 31). Works from phrenologists about phenotypic differences led to classifications of human races (e.g., Nott & Gliddon, 1854), and the evolving socio-political currents of *Eugenics* and *Social Darwinism* added the dimension superiority versus inferiority to place the human races further towards the one or other end of that dimension (Miles, 1995, p. 33). The race concept now comprised phenotypic characteristics (e.g. skin color, hair structure, form of nose), intellectual abilities, and characterological attributes (e.g., "savage" vs. "civilized" cultures), which were subject of genetic determinism. Modern Population Genetics and Physical Anthropology provided no scientific support for a race genotype (Boyd, 1950; Montagu, 1964, 1972, 1974), and, in fact, the United Nations Educational, Scientific, and Cultural Organization (UNESCO) abandoned the race concept as early as in 1952. Despite this lack of scientific and political support, the discourse on human races continues to the present and remains an "unfinished business" in the social

sciences, including psychology (Garvey, 2001). Race, it appears, has over time shifted to comprise a biological and a social component in the sense that "physical characteristics partially define race, but only in the context of a decision by society to consider those physical characteristics relevant" (Farley, 1988, pp. 4).

The term *ethnicity* was used by Weber (1922) in a way that stressed the socio-cultural and behavioral differences between peoples. Other authors defined dimensions such as externally ascribed and internally accepted group-membership (Barth, 1969) or ethnic identification (Cohen, 1978). The obvious weakness of these conceptualizations lies in their artificiality and subjectivity. However, the definitions ignore the *biologization* inherent to the race concept and share the conceptualization of cultural differences as social process instead of genetic determination.

Second, a differentiation of the concepts prejudice, discrimination, and racism – not always neatly distinguished in the scientific literature – is put forward. In his standard work "The nature of prejudice", Allport defined prejudice as "an antipathy based on a faulty and inflexible generalization. It may be felt or expressed. It may be directed toward a group as a whole, or toward an individual because he is a member of that group" (1954, p. 9). On that basis, he conceptualizes discrimination as one form of expressing the rejection of an outgroup, and defines the term as "differential treatment that is based on ethnic categorization […] [that, M. G.] does not take account of the particular characteristics of an individual as such" (1954, p. 52). This definition yet implies, what authors have later explicitly stated: "The behavioural manifestation of prejudice is discrimination" (Jones, 1997, p. 10). Simpson and Yinger add that "discrimination is a system of social relations, not an isolated social act" (1987, p. 23) and, corresponding with Tajfel (1978)[2], conceptualize discrimination as a kind of intergroup behavior.

The term *racism* has experienced what has been labeled a "conceptual inflation": Miles (1995, p. 61), for example, argues that definitions of racism are often broad and imprecise and, therefore, lack analytical value. As an example, a classical definition of racism by the UNESCO (1978) states that "racism includes racist ideologies, prejudiced attitudes, discriminatory behaviour, structural arrangements and institutionalized practices resulting in racial inequality" (p. 3). The definition, thus, accounts for attitudes as well as behaviors as modes to express racism and for individuals as well as institutions as agents of racism, and so presents a highly complex concept.

Scientists have attempted to further differentiate the concepts. Essed (1997), for example, states that "the presence of prejudice toward a certain ethnic group does not by definition imply the presence of racism" for antipathy *per se* may "be indicative of prejudice but not of racism" (p.

[2] Tajfel (1978) has proposed an interpersonal-intergroup behaviour continuum to differentiate two poles of social interaction: Interpersonal behaviour, which is guided by individual characteristics and intergroup behaviour, which is based on group membership. According to Tajfel, discrimination is positioned close to the pole of intergroup behaviours.

10). Instead, "the concept of 'power' […] is fundamental to understanding the meaning and function of racism. Without the access to power to actually harm the 'other' as a group one may be guilty of pre-judgment […] and of individual discrimination, but not of racism" (p. 11). The power-component inherent to the concept of racism has also been emphasized by other authors (e.g., Green, 1995; Wijeyesinghe, Griffin, & Love, 1997).

The tripartite model has provided a categorization of three sub-types of racism (Essed, 1990; Jones, 1997): 1) *Individual racism* is conceptualized as resembling race prejudice and incorporates the "belief in the supremacy of one's race over another and the behavioral enactments that maintain those superior and inferior positions" (Jones, 1997, p. 13). 2) *Institutional racism* is defined as, first, "the institutional extension of individual racist beliefs" and, second, "the byproduct of certain institutional practices that operate to restrict – on a racial basis – the choices, rights, mobility, and access of groups of individuals" (p. 14). 3) *Cultural racism* generally refers to "the individual and institutional expression of the superiority of one's race's cultural heritage over that of another race" (p. 14). Specifically, the situation that one group "enjoys the power to define cultural values" (p. 14) results in the sovereignty to interpret a nation's history regardless of diverging perceptions of other groups, in the portrayal of current group relations and group characteristics, and in the marginalization of those groups or individuals diverging from these beliefs.

Another focus of discussion has circled around the question whether racism has turned faces over the last decades: Some authors have argued that because the overt expression of racist attitudes has become increasingly socially unacceptable, more subtle ways of displaying prejudice have developed (Pettigrew, 1989). The incongruity that negative attitudes persist in people who think of themselves to be uninfected by prejudice converged in three ideas: (1) *Symbolic racism* (Sears, 1988), (2) *modern racism* (McConahay, 1983), and (3) *aversive racism* (Gaertner & Dovidio, 1986). The underlying attitudes were referred to by Pettigrew and Meertens (1995) as *subtle prejudice*, and are conceptually distinct from the "classical" blatant prejudice. The latter is characterized as "hot, close, and direct" (Pettigrew and Meertens, 1995, p. 58) and is comprised of the two components threat and rejection, as well as opposition to intimate contact with the outgroup. The former is described as "cool, distant, and indirect" (p. 58) and involves the three components defense of traditional values, the exaggeration of cultural differences, and the denial of positive emotions towards outgroup members. Pettigrew and Meertens (1995) have provided evidence for the existence of a typology of blatant and subtle prejudiced persons, distinguishing bigots (high in blatant and subtle prejudice), egalitarians (low in blatant and subtle prejudice), and subtles (low in blatant, high in subtle prejudice).

1.2 Sociopolitical contexts of racial and ethnic discrimination

1.2.1 Australia

The Australian Bureau of Statistics (2008) reports that approximately (approx.) 450.000 Aboriginal people live in Australia[3]. Aboriginal people reside throughout the continent, but present major populations along the Australian East coast in the federal states of New South Wales and Queensland.

Racism against the Aboriginal peoples was and continues to be a significant issue on the fifth continent. Research has indicated that "old racism", such as the belief in racial supremacy and preference of racial segregation, still prevail in Australia (Forrest & Dunn, 2007), and that anti-Aboriginal attitudes persist (Augoustinos, Tuffin, & Sale, 1999; Dunn, Ghandi, Burnley, & Forrest, 2003; Pedersen & Walker, 1997; Walker, 1994). In a study by Mellor (2003), experiences of racism were investigated in Aboriginal people of the South-eastern region of Australia, and a taxonomy of domains was developed describing where racism was experienced by the interviewees. The author comes to the conclusion that "not only was it the norm for the participants in this study to have experienced racism in their daily lives but much of the racism experienced was one-on-one, blatant, old-fashioned racism" (p. 483). Paradies (2006a) conducted a survey study to assess exposure to racism in various settings (e.g., at work, at university, by the police). Results indicated that 70% of the participants reported to have experienced racism in at least one of the implicated settings to some degree.

Notably, health issues remain a serious problem in Australian indigenous peoples, who are affected by a disproportionally high rate of morbidity and mortality. The Australian Institute of Health and Welfare (2008) reports that hospitalized indigenous clients were up to 20.9 times more likely than non-indigenous clients to be diagnosed with rheumatic heart disease (p. 123)[4], up to 7.7 times more likely to report diabetes (p. 146)[5], and up to 27.6 times more likely to suffer from end-stage renal disease (p. 165)[6]. Infant mortality was up to 3.6 times higher in the indigenous compared to the non-indigenous population (p. 437)[7], and life expectancy for indigenous people lies around 17 years below life expectancy of the total Australian population (p. 348)[8]. The trend continues for

[3] The number corresponds to 2.1% of the total Australian population. The percentage is based on a current estimate, which reports a total population of 21.800.000 people (rounded) residing in Australia (Australian Bureau of statistics, 2009).
[4] The rate ratio of affected indigenous/ non-indigenous clients from Australian Top End is reported.
[5] The rate ratio of affected indigenous/ non-indigenous female persons from the Northern Territory (NT) is reported.
[6] The rate ratio of affected indigenous/ non-indigenous clients in the NT is reported.
[7] The rate ratio of affected indigenous/ non-indigenous clients in the NT is reported.
[8] No data of non-indigenous persons only are provided in the report.

mental health disorders: At hospitalization indigenous people were 4.0 times more likely to be diagnosed of substance abuse, 2.4 times more likely to be diagnosed of schizophrenia or other psychotic disorders, and 2.2 times more likely to have committed a suicidal attempt (pp. 408).

The same report informs that indigenous people developed significantly lower levels of literacy (i.e., writing, reading, and numeracy) than non-indigenous people in almost all federal states/ territories and over all assessed educational levels (p. 630). The socio-economic index of disadvantage (SEIFA) showed indigenous people to be over-presented in the three most disadvantaged deciles, and they represented a proportion of 31% compared to 10% of the non-indigenous population in the most disadvantaged decile (p. 812).

The socio-political environment in the Aboriginal and non-Aboriginal relations in Australia has been one of repeated strategic shifts, reapproachments and backlashes. After the national referendum in 1967, Aboriginal people were approved civil status in Australia. The referendum led to the successive abolishment of what had been previously identified as racist laws and policies, including the *assimilation policy* from 1937 that had legitimated the forced removal of Aboriginal children of mixed racial decent by government agencies, who later became known as the *stolen generations*. The *Racial Discrimination Act* that was passed through the Federal Parliament in 1975 acknowledged the Aboriginal ownership of the land and the right to seek compensation for dispossession. Since the late 1980s several reports were published that inquired acts of institutional discrimination against Aboriginal people, like *The Royal Commission into Aboriginal Deaths in Custody Report* (1991), the *Bringing Them Home Report* (Human Rights and Equal Opportunities Commission, 1997)[9], the *Social Justice Report* (2001), and the *Native Title Report* (2001).

However, on June 15th 2007, the *Little Children Are Sacred* report was released by the NT Government informing that Aboriginal persons were over-represented as infant victims and as perpetrators of sexual assaults especially in remote communities (p. 253), and issued 97 recommendations, how the problem should be politically addressed. The report was replied six days later by the nation's Prime Minister John Howard and Indigenous Affairs Minister Mal Brough, who announced the *Northern Territory National Emergency Response*. Involving a "legislative reform, governance, employment and economic development, remote area policing, health, housing, communication and engagement" (Northern Territory Government, 2009b), Aboriginal people in the NT experienced the re-establishment of governmental control over their communities and daily lives[10]: The new agenda weakens the recognition of Aboriginal land rights by partially abolishing the access of Aboriginal people to their traditional lands as stipulated by the *permit system*, and includes a five-

[9] The report acknowledged that the forcible removal of Aboriginal children was an act of genocide violating the United Nations Convention on Genocide ratified by Australia in 1949 (p. 234).

[10] The following illustrations are based on personal observations by the author and her conversations with local Aboriginal community members during her visits in the NT between October 2007 and May 2008.

year compulsory lease to the NT government over territories currently under the Native Title Act. Up to 100% of the welfare payments to Aboriginal persons may be quarantined by Centrelink[11] under specific circumstances. Aboriginal children of up to 16 years undergo compulsory health checks for sexually transmittable diseases, which are implemented by the Australian Defence Force in the remote communities. Aboriginal businesses underlie restrictions issued by the NT Government.

The recently elected Prime Minister Kevin Rudd apologized to the Stolen Generation on February 13th, 2008. However, the *Northern Territory National Emergency Response* remains in action with only minor adaptations applied by the new Federal Government.

1.2.2 Chile

With a population of approx. 600.000 people[12], the Mapuche are the largest of eight indigenous groups in Chile (Instituto Nacional de Estadística de Chile, 2002)[13]. Today, the majority of the Chilean Mapuche people live in the Chilean capital region and in the Southern provinces 8, 9, and 10. Another large Mapuche community resides on Argentinean territory on the opposite side of the Andinian mountain range along the traditional territory of Mapuche settlement.

Evidently, prejudice and discrimination against the Mapuche remain a significant issue in present-day Chile. Several studies report that negative stereotypes about Mapuche persist (Saiz, 2002; Saiz, 1991; Saiz, 1986). Merino and Quilaqueo (2003) conducted interviews with non-Mapuche and found that 80% of the participants exhibited racist ideas towards the Mapuche in their everyday discourse. In a second study, the authors inquired Mapuche people about their experiences with discrimination (Merino, Mellor, Saiz, & Quilaqueo, 2009). Interview data were categorized on the basis of the taxonomy proposed by Mellor (2003). Corresponding to the Australian study, findings suggested that "discrimination or concealed racism is an important characteristic of the Chilean society" (p. 819). However, structural differences between the Australian and Chilean situations have been identified: While institutionalized forms of racism appeared to be settled within an anonymous macro level in Australia, in Chile such practices were reported at an interpersonal level within institutionalized contexts. Furthermore, physical assault and harassment were

[11] Centrelink is an agency of the Commonwealth Government of Australia that mainly distributes social security payments.

[12] The number corresponds to 3.6% of the total Chilean population. The percentage draws from a current estimate, according to which Chiles total population amounts to 16.800.000 people (rounded; Instituto Nacional de Estadística de Chile, 2002).

[13] The National Census acknowledges eight indigenous peoples in Chile: Alacalufe, Atacameños, Aymara, Colla, Mapuche, Quechua, Rapanui, and Yámana (Instituto Nacional de Estadística de Chile, 2002).

reported at a lower frequency in the Mapuche[14] compared to the Aborigines. An unprecedented emic perspective[15] about the Mapuche experience with discrimination is provided by Paillalef (2003).

Unfortunately, only few sources exist that provide information about life and health standards of the Mapuches, which are summarized in the following paragraphs. Presently, a proportion of 62.0% Mapuche live in urban areas (Censo Nacional, 2002; p. 22). Negative immigration indices are reported for regions of traditional Mapuche settlement (Eighth and Ninth Province), while Mapuche immigration indices are positive for Santiago (Metropolitan Province) and regions surrounding the nation's capital (Fourth, Fifth, and Sixth Province; p. 46). Immigration to the major cities led to a significant shift into wage labor of the Mapuche: Only 14.0% still work in the traditionally dominant subsistent agricultural economy (Saavedra, 2002; p. 183). Instead, three quarters of the Mapuche occupy the dependent labor sector, with the majority of Mapuche men being employed as unskilled industrial or construction workers (35.0%; p. 185) and most Mapuche women working within the domestic sector (34.0%; p. 185). As a consequence of migration, shifting employment structure, and low income, 38.4% of the Mapuche live below the poverty line compared to 22.7% of the non-indigenous population (Valenzuela, 1998; Figure 8).

Notably in the educational and socio-economic sector, the Mapuche are structurally disadvantaged. A proportion of 8.7% Mapuche are illiterate compared to 4.0% in the non-indigenous population (Censo Nacional, 2002; p. 71), and only 7.0% Mapuche obtain superior education[16] compared to 16.8% in the non-indigenous population (Censo Nacional, 2002; pp. 85). The Mapuche constitute the most disadvantaged indigenous group in Chile with regard to educational opportunities (Censo Nacional, 2002; p. 85) and poverty (Valenzuela, 1998; Picture 4).

The relations between the Mapuche and non-indigenous Chileans are dominated by a continuing conflict over territory. Historically, the Mapuche have ferociously resisted the occupation of their traditional lands by the Spanish colonizers and, later, the Chilean settlers. Resisting the conquest for more than three centuries, the Mapuche were granted autonomy by the succeeding Chilean governors and governments, until they were finally subdued in 1883 during the *Pacification of the Araucania*. The following decades were characterized by a process of successive dispossession of the Mapuche from their traditional territories and their relocation into *reductions*[17] or, more recently, migration to the cities. As a consequence, the Mapuche were subjected to an often humi-

[14] This result may reflect the methodological artefact that the sample was non-representative being mainly constituted (by 85.2%) of middle and upper-class Mapuche as denoted by Merino et al. (2009).

[15] Harris (1968, p. 571) defines emic perspectives as "logico-empirical systems whose phenomenal distinctions or 'things' are built up out of contrasts and discriminations, significant, meaningful, real, accurate, or in some other fashion regarded as appropriate by the actors themselves."

[16] The term 'superior education' refers to schooling extending year 10.

[17] 'Reduction' is defined as segregated territory of indigenous settlement assigned by the political authority similar to reservations in British colonies during and after their independence from the motherland.

liating poverty and to cultural disruption. From the 1990s, they have started to provoke national and international attention for their situation. However, the protests were frequently accompanied officially by the implementation of armed forces and at times casualties were deplored: The last case occurred in January 2008, when a 22 year old student was shot by a police man during an occupational protest action (Mapuche Nation, 2008). An increased criminalization of the Mapuche protest ocurred at the time of the Lagos governance (2000 - 2006), when the persecution of acts of private property damage under the *Anti-terrorist law* was implemented. Applied exclusively against the Mapuche and supporters of the Mapuche protest, the application of the Anti-terrorist law provides an example of institutionalized discrimination faced nowadays by the Mapuche in Chile (Human Rights Watch, 2004, p. 36).

A common myth within contemporary Chilean society describes the belief that the Chileans nowadays constitute a "mixture" of the brave Mapuche warriors and the noble colonists (e.g., Villalobos, Silva, Silva, & Estelle, 1996, p. 70 [18]), a reflection of an assimilationist ideology that deprives the Mapuche people of the status as a distinct ethnic entity. That this idea is challenged by over half a million people in Chile, who claim their Mapuche decent and identity (Censo Nacional, 2002; p. 11) has not unsettled the supporters of this myth, but is an illustrative example of a concealed racist theme dominating the public discourse as concerns the Mapuche in Chile.

1.3 Positioning this study

Group relations within the Australian and Chilean societies have their origin in the historical conflicts over territorial grounds, which had arisen between European settlers and indigenous groups in the period of European colonization on the Australian and American continent. The current conditions in both countries unveil the ethnic stratification between the subdued indigenous minority groups and the dominant majority groups of European descent[19]. Relations have matured into a system of structural inequality and oppression in favor of the majority "elite".

In both countries, current regard for the respective indigenous minority can be positioned with Farley into the framework of paternalistic and rigid competitive systems (1988, pp. 75). However, the Australian context appears to be dominated by paternalistic structures (as exemplified by the

[18] Citation from this reference: "They contributed with their blood to give us the land in which we live, and they gave us a part of their culture that, amalgamated with the Spanish culture, constitutes the roots that affirm our nationality." ["Contribuyeron con su sangre a darnos la tierra en que vivimos y nos llegaron parte de su cultura que, amalgamada con la peninsular, constituyen las raíces que afirman nuestra nacionalidad."].

[19] This schematic picture simplifies the complex group relations that may additionally arise between separate indigenous minority groups, or indigenous and recent immigrant groups. However, they do not constitute the focus of work presented here, and remain – although recognized – excluded from detailed reflection.

current *Northern Territory National Emergency Response Act*), while in the Chilean case the relationship tends to be more competitive (as current persecutions under the Anti-terrorist law illustrate). Farley described both, the paternalistic and competitive systems, as resembling a caste system, in which the social status of minority group members is determined and supported by a system he labels "racial etiquette" (p. 76). However, while the paternalistic system is structured as such that the minority is not permitted to compete for resources, such competition prevails in some important areas in the competitive system. It is argued that within a rigid competitive system the group conflict, consequently, tends to be more open and the system constantly carries the possibility of repression and mass violence against the minority group.

From the targets' perspective, racist acts and discrimination constitute an existential experience in the sense that (1) such experiences take hold of all central areas of life (e.g., work, family, health, education), (2) their influence is permanent (i.e., extends over a person's life-span) though experiences may vary in depth (i.e., severity), and (3) being a target of RED profoundly and permanently affects a person's psychological development and psychosocial functioning. It is consequently assumed that in a society that conserves and traditionalizes a deeply rooted, historically embedded race ideology against an indigenous minority, discrimination is systemic and an inevitable experience for members of the disadvantaged group.

Moving back into the conceptual realm, a concise definition of the research subject can now be developed. The concepts prejudice and racism are *per definitionem* (Allport, 1954; UNESCO, 1978) based on attitudes. However, from a target's perspective intergroup conflicts may be "fuelled" by attitudes, but are experienced through "acting-out". The behavioral manifestations of group-related attitudes are accounted for by the concept of discrimination. The concept of discrimination as differential treatment based on group membership, however, needs to be understood within the context of an asymmetrical distribution of power and resources between the conflict parties. From this point of view, the classical definition of discrimination is extended and further differentiated by adding attributes inherent to the racism concept in the context of my study.

Even in absence of scientific evidence of the race concept, discrimination may be promoted by attitudes based on racial as well as ethnic prejudice. Therefore, I decided to consider both conceptual understandings of cultural difference in defining the subject of the present study. As a result, the study was positioned within the frame of *racial and ethnic discrimination* (RED)[20].

[20] Much of the existing literature is less precise in the use of terminology as, frequently, the concepts racism and discrimination are applied interchangeably. If studies are cited, I will refer to the original terms used by the author acknowledging the potential of conceptual overinclusivity. When presenting my own ideas, I will exclusively use the expressions RED or discrimination.

2. Responses to racial and ethnic discrimination

The following chapters present an overview about the existing approaches the literature provides about responses to RED. The scientific field is subsequently subdivided into research that focuses on the theoretical development of the subject, here referred to as conceptual approach, and the primary empirically oriented investigations, subsequently labeled descriptive approach. With regard to the conceptual approach, two major perspectives are introduced: The first integrates RED into frameworks of classical stress theories. The second is concerned with the development of typologies or classification systems about responses to RED.

The descriptive approaches are complemented by empirical works that provide a variety of particular aspects conceptualized as responses to discrimination that are reported in the second part of this section. Chapter 2 is concluded by a summary of the presented approaches and findings.

2.1 Conceptual approach

2.1.1 Discrimination as stressor

In the last decade, researchers have started to conceptualize discrimination and racism as specific forms of social stress (Brondolo, Kelly, Coakley, Gordon et al., 2005; Clark, Anderson, & Clark, 1999; Major, Quinton, & McCoy, 2002; Mellor, 2004; Utsey, Ponterotto, Reynolds, & Cancelli, 2000). Harrell (2000) defined racism-related stress as "race-related transactions between individuals or groups and their environment that emerge from the dynamics of racism, and that are perceived to tax or exceed existing individual and collective resources or threaten well-being" (p. 44).

The upcoming chapters introduce current scientific developments on the topic in the following succession: In the first chapter, the various types of stressors from the general stress research and the specific literature on RED are distinguished. The second chapter introduces conceptual models that adapt classical theories from stress research to the specific experience of RED. These models provide details to various variables, but put a major emphasis on reactions and responses to RED. Finally, research that has focused on the relationship of racism-related stress and well-being is presented.

a) The stress continuum

The literature differentiated four qualitatively distinct categories of stressors: Traumata, life events, chronic role strains, and hassles (Aldwyn, 1994). A psychological trauma implicates that a "person experienced, witnessed, or was confronted with an event or events that involved actual or threatened death or serious injury, or a threat to the physical integrity of self or others" (American Psychiatric Association, 2000, p. 467). Life events relate to major, but not traumatic life experiences such as death of spouse, divorce or marital separation, passing of a jail term, loss of an employment position, and so forth (Aldwyn, 1994, pp. 58). Research on chronic role strain concentrates on settings of potential role conflict (Pearlin & Schooler, 1978), that is 1) marital strain (e.g., non-acceptance of spouse, non-reciprocity in give and take, and frustration about role expectations), 2) parental strain (e.g., failure of the child to live up to parental standards of behavior, nonconformity to parental aspirations and values, and disregard to parental status), 3) occupational strain (e.g., inadequacy of rewards, noxiousness of work environment, depersonalisation, and work overload), and 4) household economic strain (e.g., difficulties in acquiring the necessities of life and paying the monthly bills). Daily hassles have been defined as "ongoing stresses and strains of daily living" (DeLongis, Coyne, Dakof, Folkman, & Lazarus, 1982, p. 120), and include, for example, troubles with a neighbor, being lonely, not getting enough sleep, or having too many things to do.

Aldwyn (1994) organized the four kinds of stressors along a continuum of two dimensions: Pervasiveness and temporal exposure. The dimension pervasiveness conceptualizes the quality of a stressor on a continuum from minor to severe. Hassles are, consequently, positioned closer towards the minor end point of the scale, while psychological traumata are positioned further towards the severe end point. The temporal dimension, depending on the time of exposure to the stressor, ranges between short and long. A single trauma is, for example, positioned close to the short end point of the dimension, while chronic role strains indicate long lasting exposure to the stressor. Figure 1 illustrates the localization and range of the four types of stressors according to Aldwyn's conceptualization.

In a similar vein, Harrell (2000) specifically proposes six types of racism-related stressors: 1) Racism-related life events (i.e., "significant life-experiences", p. 45); 2) vicarious racism experiences (i.e., observing or receiving a report of racism against somebody else); 3) daily racism microstressors (also referred to as "interpersonal discrimination", "humiliation dynamic", and "microaggressions", pp. 45); 4) chronic contextual stress (i.e., "the impact of social structure, political dynamics, and institutional racism on social role demands", p. 46); 5) collective experiences of racism (i.e., "perceptions of racism towards one's group [reflecting, M.G.] cultural-symbolic and sociopolitical manifestations of racism", p. 46); and 6) transgenerational transmission of group traumata

(i.e., “race- and oppression related family and community stories that are passed down through generations”, p. 47). Harrell’s proposal is well-reflected in the previously introduced qualitative studies conducted in Australia (Mellor, 2003) and Chile (Merino et al., 2009) that inquired Aboriginal and Mapuche people about their experiences with racism. Examples for any of the six types of racism-related stressors are obtained from these two sources.

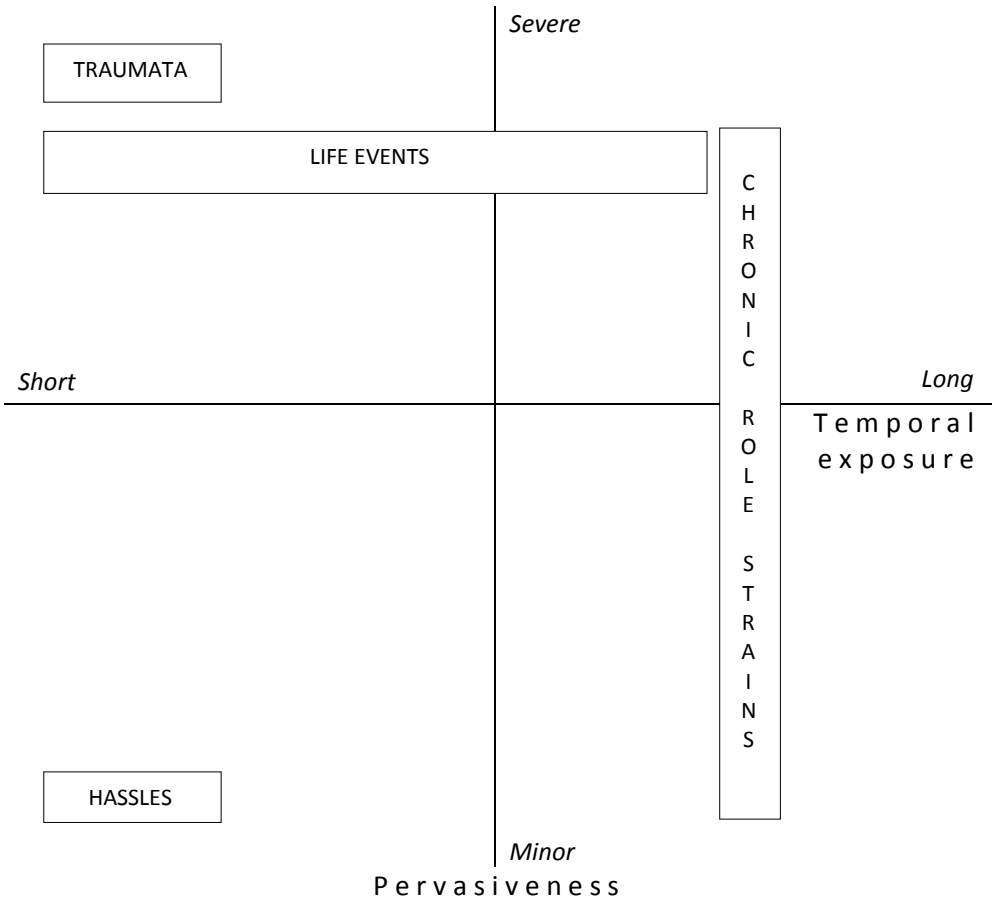

FIGURE 1: Types of stressors located along the dimensions pervasiveness and temporal exposure (Source: Aldwyn, 1994, p. 52).

b) Classical stress theories

Lazarus and Folkman’s (1984) transactional theory of stress stands in the tradition of interactional stress concepts. Rather then positioning stress within a stimulus-response framework, the authors define stress as “a particular relationship between the person and the environment” (Lazarus & Folkman, 1984, p. 19). The transactional theory of stress has been modified by Outlaw (1993) to suit the specific stress stimuli that relate to the experience of “racism, invidious discrimination,

and oppression" (p. 400) in African Americans. It was aimed to provide a conceptual framework for the examination of the influence of racism on stress and coping, and of the stress-illness link in disadvantaged populations.

Outlaw conceptualizes racism, invidious discrimination, and oppression as environmental stressors that result in the primary appraisal of stressfulness. If the situation results in the interpretation that harm or loss have occurred, passive negative emotions, such as withdrawal, depression, and shame result and emotion-focused coping is promoted. According to the author, repeated exposure to racism may result in the damage of self-esteem and increase the probability of a harm and loss appraisal in children. The perception of a racist act as a threat induces an active negative emotion, and encourages anticipatory coping. The appraisal of challenge stimulates active-negative emotions that may result in hopeful responses (e.g., the anticipation of spiritual gain). Outlaw's model is depicted in Figure 2.

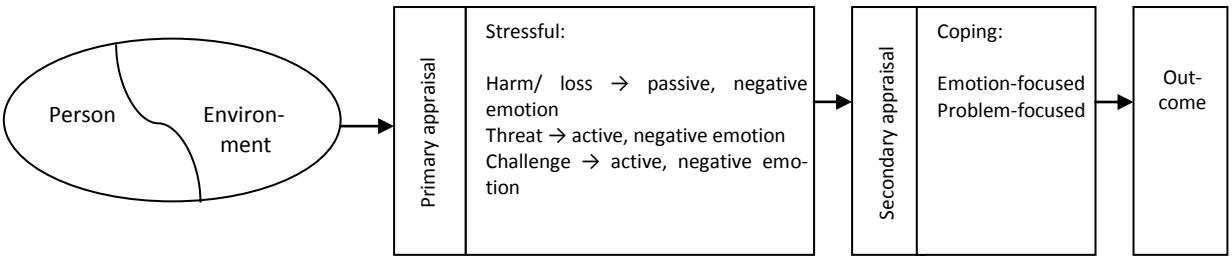

FIGURE 2**:** Transactional theory of stress adapted to racism as stressor
(Source: Outlaw, 1993, p. 403).

Another theoretical account adapting the transactional approach to the stressful experience of racism was provided with the biopsychosocial model of Clark, Anderson, Clark, and Williams (1999; Figure 3). An environmental stimulus, moderated by constitutional factors (e.g., skin tone), sociodemographic factors (e.g., socio-economic status), psychological factors, or behavioral factors (e.g., type-A behavior) is interpreted as either racist, stressful but not racist, or not stressful (primary appraisal). If the stimulus is identified as stressful – may it be identified as racist or not – the person decides, which coping strategies are available and likely to be successful (secondary appraisal). The applied strategies are related to psychological and physiological stress responses (e.g., substance abuse or hypertension) and to long-term negative health outcomes (e.g. depression or chronic damage to the cardiovascular system).

By comparison, Outlaw assumes that a racist event is automatically considered to be stressful by the perceiver. In contrast, Clark and collegues (1999) postulate that a racist stimulus can be correctly identified, misinterpreted as non-racist, or remain undetected. This conception has received

ample evidence by contemporary research (Johnson, Simmons, Trawalter, Fergueson, & Reed, 2003; Kobrynowicz & Branscrombe, 1997; Ruggiero & Taylor, 1997; Schmitt & Branscombe, 2002).

While Outlaw remains unspecific about potential outcomes of the coping process, Clark et al. (1999) differentiate between the mediate psychological and physiological stress responses, and long-term health outcomes, an approach that is also conceptually congruent with empirical findings (Holahan & Moos, 1987; Noh & Kaspar, 2003). Unfortunately, the authors remain vague about specific coping strategies applied to the context of discrimination, differentiating only adaptive versus maladaptive, and general versus racism-specific coping responses.

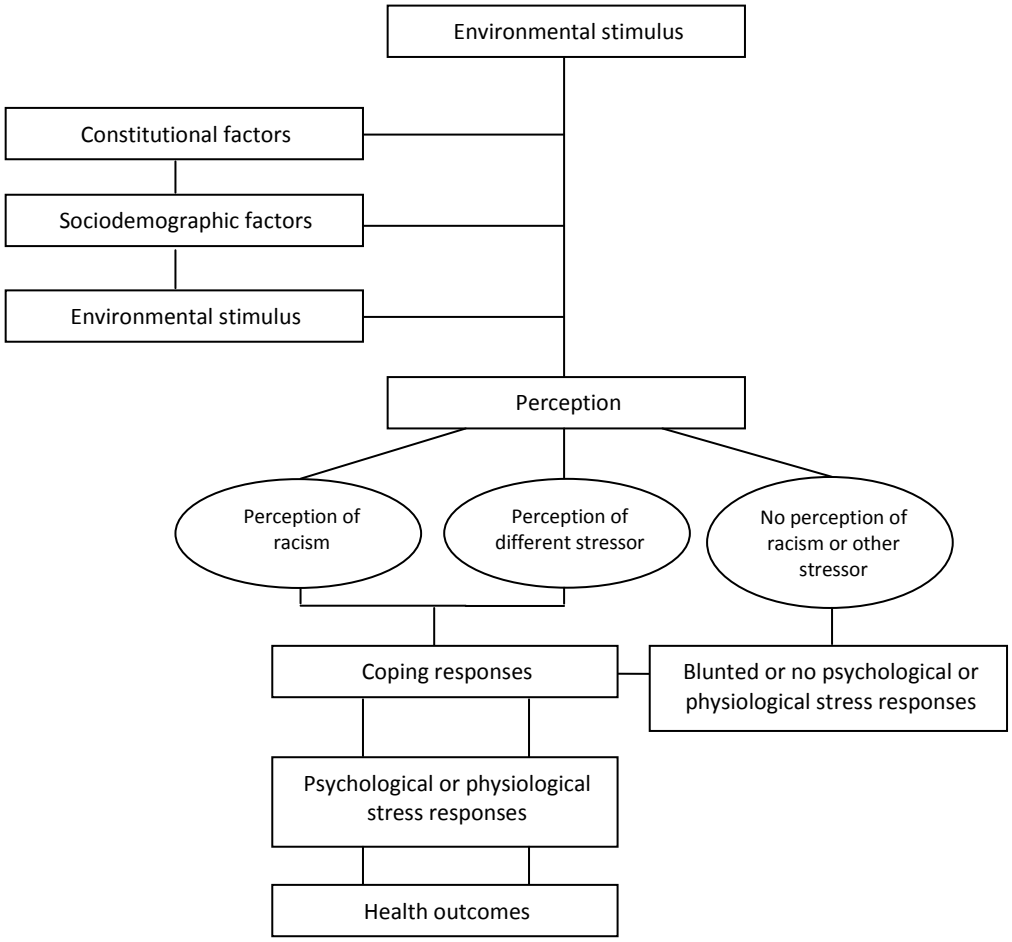

FIGURE 3**:** Biopsychosocial model of racism as a stressor
(Source: Clark, Anderson, Clark, & Williams, 1999, p. 810).

Harrell has proposed a model of racism-related stress and well-being (2000) that implicitly reflects an adaptation of Goldfried and Sprafkin's SORC-model (1976) to racism-related stress: Antecedent variables, i.e., person and environmental factors are thought to "set the background and context for life experiences and personal development" (p. 48). Familial and socialisation influences

(e.g., racial socialisation) affect the person factors, for example, the development of personal characteristics, or the nature and quality of social relationships. Sources of stress relate to the six types of racism-related stress outlined in the preceding chapter, but also include other status-related and general stressors, like sexism, or general not race-related role strain. Internal and external mediators (e.g., self-esteem, worldview, acculturation, affective and behavioral responses, and social support) are involved in shaping the final outcomes of the stress experience. The author proposes that racism potentially affects the individual's well-being through adaptational outcome variables that may be physical (e.g., hypertension, cardiovascular reactivity), psychological (e.g., depression, anxiety), functional (e.g., academic achievement, parental funcioning), or spiritual (e.g., loss of faith, existential angst) in nature.

An interesting aspect of Harrell's model relates to the specification of various response styles to the experience of racism that was missing from the previously introduced conceptualizations. She defines racism-related coping styles as "relatively stable adaptations that evolve in the service of coping with racism [and that, M.G.] are to be distinguished from coping behaviour, which refers to specific actions that individuals take in response to a particular stressor" (p. 51)[21].

c) Stress and well-being in minority groups

Researchers have proposed several theories that link the experience of racism to health status. Geronimus' weathering hypothesis (1992) proposes that accelerated aging due to the cumulative effect of racism causes ill-health in African Americans. This cumulative or dose effect of racism implies that health risks increase as a function of exposure to racism and age of the person concerned. In their biopsychsocial model[22], Clark et al. (1999) suggested that the social stress of racism affects immune, neuroendocrine, and cardiovascular functioning and, therefore, potentially contributes to long term health problems such as depressive disorders, heart disease, arterial blood pressure changes, upper respiratory infections, and cold susceptibility. Similarly, Harrell (2000) proposed that racism potentially causes physical and psychological maladaptation.

Empirical studies that concerned the cardiovascular responses to experiences of racism have revealed conflictive findings. However, many supported an increased cardiovascular reactivity as physical response to race-related stress (Jones, Harrell, Morris-Prather, Thomas, & Omowale, 1996; Krieger & Sidney, 1996; McNeilly et al., 1995). To my knowledge, no research on other psychophysiological systems has been conducted to date. However, findings from studies examining the

[21] The particular response styles are introduced in chapter 2.2.1 (Introduction).
[22] See chapter b).

effects of chronic and interpersonal stressors indicate a decrease of humeral and cellular immune functions (Cohen & Herbert, 1996; Herbert & Cohen, 1993; Kiecolt-Glaser, Marucha, Malarkey, Mercado, & Glaser, 1995).

The relationship of ethnicity related stress and subjective well-being has attracted major scientific interest. Subjective well-being has been conceptualized as people's evaluation of life that is comprised of a cognitive and an emotional component: While the former refers to the personal assessment of life satisfaction (global or specific, e.g., marital satisfaction), the latter includes the experience of positive affect (i.e., happiness) or negative affect (i.e., depression; Diener, Emmons, Larsen, & Griffin, 1985). Compelling evidence for a direct association between perceived discrimination and global life satisfaction was provided in various contexts (e.g., Contrada et al., 2001 in U.S. African American adults; Barnes & Lightsey, 2005 in U.S. African American youths; Verkuyten, 2008 in Turkish immigrants in the Netherlands; Virta, Sam, & Westin, 2004 in Turkish immigrants in Norway and Sweden). With regard to the direction of this relationship, Harrell (2000) suggested that perceived discrimination determined a person's state of well-being.

2.1.2 Typological models

Only few accounts are reported in the literature that classified responses to RED. Farley differentiates four subgroups of adaptive responses to minority status (1988, pp. 137): (1) Status acceptance, which may reflect a) true acceptance of the inferior status, b) an acceptance that nothing can be done about the group's situation, or c) a pretention to accept a social role, when in fact playing with it to one's own advantage. (2) Displaced aggression refers to frustration about the inferior status that, because of the existing power structure in a society, cannot be directed towards dominant group members, and is, consequently, inflicted upon other minority group members. (3) Status avoidance is exhibited if minority group members attempt to avoid reminders of their inferior status or escape reality entirely. An avoidance response is expressed through withdrawal from dominant group members, or, more dramatically, purposeful substance abuse. (4) Assimilation seeking is described as "accepting the system but attempting to deny one's role within that system" (p. 139). Serious attempts to become absorbed or accepted within the majority group's system are indicative of an assimilation response. *Passing* is considered the most extreme form of an assimilation response, and results in behaviors that aim to erase any racial or ethnic distinction to the outgroup (e.g., coloring hair, adopting an ethnically neutral name).

Simpson and Yinger (1987) follow a similar approach proposing four basic types of individual responses to prejudice and discrimination: Avoidance, aggression, acceptance, and reformism (Fig-

ure 4). They further suggest that group responses (Figure 4, column III) may emerge among those who concur in their answers to two strategic questions: 1) “Can change be accomplished within the system? Is reform possible?” (Figure 4, column I), and (2) “Do minority-group members have access to change forces?” (Figure 4, column II).

The individual response types have been characterised to more detail. Accordingly, avoidance results in either withdrawal from the ingroup, or, oppositely, from the dominant outgroup. The authors state that complete withdrawal from the minority group in group relations, in which “the colour line is drawn sharply” (p. 139), is an option only for passing minority group members. Passing, however, is optional for those minority members only, whose racial decent is not salient for dominant group members by the person’s phenotypic characteristics (e.g., skin tone, physical shapes), as much as by socio-cultural attributes (e.g., language or accent, name, family background, knowledge of group norms). The authors argue that this strategy may work only for few people, and is rather used temporarily for specific purposes than an actual attempt to permanently assimilate into dominant culture. Withdrawal from the dominant group may be expressed by segregated sub-communities primarily composed of minority group people, separatism, or by emigrating from the country. These rather intensive avoidance techniques may not represent the reality of most minority group members, who face frequent contact with dominant group members. On an everyday basis, minority group members may exert avoidance by strategies such as retreat into privacy, or building nuclear bases around ingroup neighborhoods and businesses.

Aggression may be direct or indirect, and aimed towards outgroup or ingroup members. Direct aggressive responses can take the form of spontaneous or organized acts of physical or verbal attack. The authors claim that because of an unequal distribution of structural power, aggressive responses against outgroup members are more often expressed indirectly, for example through boycott, artistic expressions, or humor. Intragroup aggression is interpreted as an act of redirected aggression upon substitute targets when, in fact, dominant group members are the source of hostile feelings.

Acceptance is subdivided threefold: 1) Wholehearted acceptance of an inferior position, which results in resignation and passivity, 2) acceptance of inferiority in a specific situation, which constitutes a rational decision, and 3) unconscious acceptance, or the tendency of minority group members to see themselves through the eyes of the dominant group that produces ambivalence and tension, and possibly results in extraordinary amounts of striving or aggressiveness.

Reformism is analytically distinct from the other three response types, but shares aspects with each. The system is accepted, but as a system capable of change, not as a system that petrifies the inferior status of the minority group. Acts of aggression promoting social change differ from aggressive revolt in that reformists are ready to collaborate with dominant group members.

	I	II	III
Types of individual response:	Can change be accomplished within the system? Is reform possible?	Do minority-group members have access to change forces?	If many agree on the answers, one has a group or social movement of these types:
Avoidance	No	No	Secessionist
Aggression	No	Yes	Militant
Acceptance	Yes	No	Assimilationist
Reformism	Yes	Yes	Pluralistic

FIGURE 4: Types of individual and group responses to minority status

(Source: Simpson and Yinger, 1987, p. 139).

The models of Farley (1988) and Simpson and Yinger (1987) exhibit similarity in the individual response types they propose. Both conceptualize an avoidant, aggressive, and accepting response type, though they differ to some degree. Simpson and Yinger allow a direct aggressive response against the perpetrator, while Farley exclusively recognizes displaced aggression. The accepting response type also allows an unconscious acceptance in Simpson and Yinger's model, while Farley proposes only purposeful acceptance. Passing, recognized as an assimilation response by Farley, reflects only a form of avoidance in Simpson and Yinger's model. Instead, these authors propose a reformist response that Farley's model does not mark out. Simpson and Yinger's model additionally extends its focus from mere individual responses to group responses that emerge if a quantity of people forms a consensus in their response to the strategic questions, a conceptual refinement Farley's model does not provide.

2.2 Descriptive approach

Much empirical research has focused on isolated aspects of responses to RED. The purpose of the following paragraph is to review those aspects that are relevant for the present study. Before turning toward the description of aspects, a central differentiation of what is labelled here responses to RED needs to be made. It has been implied in the previously introduced transactional model of stress (Lazarus & Folkman, 1984) that stress responses occur as an immediate (emotional) reaction (as a consequence of primary appraisal) and in form of a delayed coping response (as the result of secondary appraisal). As it presents the focus of the study, the subsequent chapters focus on the delayed, long-term, habitual response styles, while essentially excluding the immediate reactions.

2.2.1 General accounts

Paradies (2006b) provided a synopsis of reactions and responses to racism that he classified as either cognitive, affective, or behavioral (Figure 5)[23]. Cognitive responses may be active or passive, and within these categories adaptive or maladaptive. For example, self-blame is regarded to be a passive maladaptive response that occurs if a racist experience is given an internal attribution. Oppositely, system-blame, an active adaptive response, results from an external attribution to a racist experience.

Reactions/ responses to racism

Cognitive

Active: *Adaptive* – rejecting dominant ideology, strengthened ethnoracial identity, system blame, imagining responses to racism; *maladaptive* – hypervigilance, attribution anxiety, denial of racism, self blame

Passive: *Maladaptive* – adopting dominant ideology, weakened ethnoracial identity, resigned acceptance

Affective

Inner-directed disempowered: *Active* – shame, self-hatred, humiliation, anxiety, fear; *Passive* – powerlessness, hopelessness, confusion, depression

Outer-directed: *Empowered* – contempt, amusement, sorrow/ sympathy; *disempowered* – anger, annoyance, frustration

Behavioral

Inner-directed adaptive: *Problem-focused* – passing, avoidance, strategic response; *emotion-focused* – praying, meditation

Outer-directed adaptive: *Problem-focused* – verbal, physical, or legal confrontation; *emotion-focused* – establishing and utilizing social networks/ safe spaces, write, draw, sing, or paint about racism

Maladaptive: *Problem-focused* – passing, over-/ under achievement/ striving (e.g., John Henryism, stereotype threat); *emotion-focused* – alienation from other ethnoracial group members, risk-taking/ self-harming activities

FIGURE 5: Reactions and responses to racism

(Source: Paradies, 2006, p. 152).

Affective responses to racism may be inner-directed or outer-directed, disempowered or empowered, active or passive. For example, a person might feel amused (outer-directed empowered

[23] As Paradies did not differentiate, which of his proposed aspects constituted reactions or responses to racism, both remain part of the descriptions.

response) or annoyed by what is interpreted as a perpetrator's ignorance (outer-directed disempowered response).

Behavioral responses to racism may be adaptive or maladaptive, outer-directed or inner-directed, problem-focused or emotion-focused. For example, an adaptive emotion-focused strategy involves the establishment und utilization of social networks, while alienation from ingroup members indicates a maladaptive emotion-focused response.

Because the existing literature does not provide further general accounts to my knowledge, a review of psychometric scales is provided that have a focus on perceived discrimination and its outcomes. Table 1 gives a summary of the now introduced scales. It can be stated that, in fact, over the last decade much effort has been granted to the development and validation of questionnaires related to the experience of racism in particular minority populations. By providing these scales it was aimed to "facilitate the development of an integrative body of knowledge across different ethnic groups regarding the existence, determinants, and consequences of discrimination" (Brondollo et al., 2005, p. 335).

The disadvantage of these scales lies in their almost exclusive focus on the exposure to different kinds of racism related stressors and only few instruments additionally inquire reactions to racist experiences (e.g., Sanders-Thompson, 1996; McNeilly et al., 1996). For example, some questionnaires ask for the occurrence of racist encounters within specific life domains, such as education, job, housing, service providers, and judicial agencies[24]. Other instruments are conceptually based on Jones' tripartite model of racism (1997) and assess racist experiences occurring at an individual, institutional, and macro level[25]. These scales, consequently, inquire perceived discrimination, which was defined as "a minority members' subjective perception of unfair treatment of racial/ ethnic groups or members of the groups, based on racial prejudice and ethnocentrism" (Noh, Beiser, Kaspar, Hou, & Rummens, 1999). The concept specifically distinguishes objectively and subjectively experienced discrimination to acknowledge the fact that "discrimination can occur without being perceived by the person being discriminated against, and, conversely, it can be perceived in cases where it did not occur" (Phinney, Madden, & Santos, 1998, p. 938).

[24] For example the "Perceived Ethnic Discrimination Questionnaire" (PEDQ) by Brondolo et al. (2005), the "Schedule of Racist Events" (SRE) by Landrine, Klonoff, Corral, Fernandez and Roesch (2006), the "Perceived Experience of Discrimination as Stressful Life Events" (PERSLE) by Sanders-Thompson (1996), and the "Index of Race-Related Stress" (IRRS) by Utsey and Ponterotto (1996).

[25] For example the "Perceived Discrimination Scale" (PDS) by Bodkin-Andrews, Craven, and Marsh (2004), the Racism and Life Experience Scales (RaLES) by Harrell (1997), and the "Perceived Racism Scale" (PRS) by McNeilly et al. (1996).

TABLE 1: Psychometric scales assessing experiences of racism.

Scale	Conceptualization	Application
Index of Race-Related Stress (IRRS; Utsey & Ponterotto, 1996)	- tripartite model (Jones, 1972) - English - 46-item scale	- measurement of racist encounters and associated psychological distress - validated in U.S. African-American community and in-patient samples
Perceived Discrimination Scale (PDS; Bodkin-Andrews, 2004)	- tripartite modell (Jones, 1972) - English - 12-item scale	- assessment of perceptions of discrimination - validated in multi-cultural student sample in Australia
Perceived Ethnic Discrimination Questionnaire (PEDQ; Brondolo, 2005)	- racism across life domains - English and Spanish - 70-item scale	- measurement of perceived racism - 3 versions, validated in: 1. U.S. African Americans, 2. Caribbean, Central and Latin Americans, 3. Mexican Americans
Perceived Experiences of Racism as Stressful Life Events (PERSLE; Sanders-Thompson, 1996)	- racism across life domains - English - 6-item scale	- assessment of perceived racism, pervasiveness of and emotional response to the event - validated in U.S. African Americans
Perceived Racism Scale (PRS; McNeilly et al., 1996)	- tripartite model (Jones, 1972) - English - 51-item scale	- assessment of perceived racism, emotional and immediate coping response - validated in U.S. African Americans
Racism and Life Experience Scales – Revised (RaLES; Harrell, 1997b)	- multidimensional conceptualization of racism-related stress - English - complete instrumentation: 430 items in 14 subscales	- measurement of various dimensions of racism-related stress and associated constructs (e.g., reactions to racism, coping styles, racial attitudes) - validated in U.S. African Americans
Schedule of Racist Events (SRE; Klonoff & Landrine, 1999)	- racism across life domains - English - 18-item scale	- measurement of perceived racist events and pervasiveness - validated in U.S. African Americans

To the present work, however, it is of minor importance whether a person acknowledges the fact that she/ he is subjected to discrimination. Instead, it is assumed that members of the investigated minority groups unexceptionably experience discrimination to some degree, but vary in their responses to this existential experience. To my knowledge, Harrell's *Racism and Life Experience Scales* (RaLES; 1997b) is the only psychometric instrument with a focus on this topic, as they assess racism-related coping styles. The following ten coping styles are measured[26]: Activism[27], affilia-

[26] Because Harrell (1997b) provides no definition of the facets, sample items are reported to clarify the underlying concepts (item number in brackets behind the item).

[27] I participate in boycotts, rallies, demonstrations and other activities to support causes related to my race. (31)

tion[28], assimilation[29], culture-centric orientation[30], denial/ minimization[31], duality/ compartmentalization[32], multicultural orientation[33], rejection of own group[34], separatism[35], and vigilance for racism[36].

Those broad frameworks of responses to discrimination as proposed by Paradies (2006) and Harrell (1997b) serve as a general background to the subsequent chapters. Paradies' approach appeals because it provides a categorical framework for the numerous psychological variables of responses to RED that are provided in the literature. It is acknowledged that categorizing the individual aspects within either the cognitive, affective, or behavioral domain may simplify their conceptual essence, and their allocation into one of the domains may be the subject of dispute within the discipline. Nevertheless, this distinction is adopted in the following paragraphs to provide a general system of order.

2.2.2 Cognitive responses

The term cognition comprises any procedures or structures that relate to realizing and cognizing, such as perception, recognition, imagination, concept, thought, but also assumption, expectation, plan, and problem solution (Häcker & Stapf, 1998). The following paragraphs present empirical findings concerning the individual awareness of racism, racial identity, and social attitudes.

Referring to Paradies (2006) and Harrell (1997b), the individual awareness of racism may range between the two extremes of hypervigilance and denial[37]. Sanders-Thompson (1996) observed concurrently high levels of intrusions and avoidance in individuals that were chronically subjected to racism. These observations reflect two opposed theoretical views: The vigilance perspective and the minimization perspective. While the former states that the frequent encounters with discrimination makes low status group members more vigilant to race-related behaviors of high status group members, the latter holds that low status group members minimize the extent to which they are affected by discrimination. The vigilance perspective is supported by empirical findings related

[28] I really feel a strong love for people of my race. (40)
[29] I usually fit in very well with a group of White people. (15)
[30] I experience a strong connection to people of my race all over the world. (21)
[31] For me, thinking about racism is a waste of time. (18)
[32] I act very differently in situations with White people around. (29)
[33] I feel connected to all people of the world who are oppressed or discriminated against. (35)
[34] I refuse to let people of my race bring me down with them. (39)
[35] If I could, I would surround myself completely with people of my same racial/ ethnic group. (1)
[36] In my daily life, I must always be on the lookout for racism. (16)
[37] Feldman Barrett and Swim (1998) proposed a model based on signal detection theory that helps explaining individual differences in appraisals of prejudice and discrimination.

to sensitivity to rejection (Mendoza-Denton, Downey, Purdie, Davis, & Pietrzak, 2002), stigma consciousness (Pinel, 1999), perceptions of vulnerability to victimization (Perloff, 1983), and awareness of cultural oppression and exploitation (Whaley, 1998). The minimization perspective may be strengthened by research concerning the personal-group discrepancy (Kobrynowicz & Branscrombe, 1997; Moghaddam, Stolkin, & Hutcheson, 1997; Ruggiero & Taylor, 1995) that distinguishes between the awareness of personal versus group discrimination[38].

Paradies (2006) notes that minority group members may exhibit either a weakened or a strengthened ethnoracial identity[39]. In the footsteps of this tradition, some authors suggested that ingroup identification may serve as risk-protective factor in minority group members: For example, according to the *rejection-identification model* (Branscombe, Schmitt, & Harvey, 1999), rejection by the dominant group enhances ingroup identification as means of buffering from the negative outcomes (e.g., lowered self-esteem) by low status group membership and discrimination.

Alongside social identification stands the observation of attitudinal ambivalence in low status group members, who may feel in conflict to evaluate their own group favorably, while simultaneously justifying the system. Jost and Burgess (2000) found evidence that minority group members with strong tendencies to system justification[40] exhibited ambivalent attitudes towards their ingroup, but concurrently an increased outgroup favoritism. The authors explained this finding as an attempt to reduce cognitive dissonance in minority group members. Haye et al. (in press) reported that the Mapuche evaluated their ingroup more positively relatively to the outgroup only on an explicit level, while on an implicit level their evaluation of the outgroup appeared more positive compared to that of the ingroup. The authors suggested that the explicit ingroup favoritism is a reflection of ego- and group-justifying thoughts, whereas the implicit outgroup favoritism is understood as a hidden system-justifying orientation.

Beyond favoritism for either the ingroup or the outgroup, minority group members may experience social alienation, a lack ethnic group identification, and they may perceive themselves as to be situated at the margins of society. Orpen (1978) found evidence of such forms of alienation in Black South African workers subjected to institutional discrimination at their working place.

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[38] Research concerned with the personal-group discrepancy has indicated that minority group members frequently perceived a significantly higher level of discrimination directed against their group than against themselves (Taylor, Wright, Mogghaddam, & Lalonde, 1990).

[39] The term ethnoracial identity refers to the concept social identity proposed in the *Social Identity Theory* (Tajfel & Turner, 1979) that has acknowledged the role of social identity as part of an individual's self-concept deriving from the membership to a social group, and the value and significance an individual attaches to that membership. Accordingly, a positive social identity results in strengthened group bonds, if group membership contributes to a negative social identity, however, group attachment will weaken (Jones, 1997, p. 88).

[40] The concept *system justification* refers to a person's "tendency to defend the ideological integrity of an existing social system [and to, M.G.] emphasize the legitimacy of group status differences" (Jost & Burgess, 2000, p. 294).

Another source of interesting concepts concerning cognitive responses to RED comes from the psychodiagnostic literature. A variety of psychometric scales have been developed for concepts viable to the present work, such as ethnic identity, the Black consciousness, Black personality, and Black nationalist ideology[41]. Accordingly, the concept of social identity is depicted in the *Collective Self-Esteem Scale* (Luhtanen & Crocker, 1992) that has been developed and validated to measure four aspects of the self-evaluation of a person's social identity: a) Membership esteem assessing the "individual's judgement how good or worthy they are as members of their group" (p. 305), b) private collective self-esteem assessing "personal judgements of how good one's social groups are" (p. 305), c) public collective self-esteem assessing how "other people evaluate one's social groups" (p. 305), and d) identity assessing the "importance of one's social group memberships to one's self-concept" (p. 305).

Several psychometric scales were developed based on Milliones' following four progressive developmental stages of the Black consciousness (1973): 1) Pre-consciousness is characterized by "an acceptance of mainstream ideology, rejection of Black nationalism and general denigration of Blacks as a people" (Taylor, Brown, & Denton, 1996, p. 191). 2) Confrontation is is referred to as the "rejection of mainstream ideology and acceptance of Black nationalism" (p. 191). 3) Internalization has been described as "deliberate efforts to learn more about one's culture and origin" (p. 191). 4) Integration is referred to as "an openness to working with coalitions of whites or with philosophically different Blacks around agendas of relevance to the Black community" (p. 191). Helms and Parham (1996) drew from Milliones' approach to develop the *Racial Identity Attitude Scale* (RIAS). However, the authors slightly changed the terminology of the four types[42], and connected each stage to psychological variables such as self-esteem, emotional reactions, self-concept, or decision-making styles.

The *Black Personality Questionnaire* (Ajani ya Azibo, 1996) has its foundation in the proposed construct of a Black personality. Somewhat similar to Milliones' account, Black personality is defined as *Black awareness* that manifests itself in a set of values, beliefs, and preferences, and that "predisposes Black people to a certain type of behavior(s)" (Ajani ya Azibo, 1996, p. 242). The author proposes six subsets of Black awareness: 1) Pro-White responses indicate "acceptance and approval of the White standard and Whites in general" (p. 242); 2) Anti-Black responses exhibit "negativism toward a Black or self-affirmative orientation" (p. 242); 3) Anti-White responses indicate "a negation of Whiteness and White orientation" (p. 242); 4) Pro-Black responses indicate "both Black self-identity (personal) and collective Black identity" (p. 242); 5) Pan-African responses indicate "an orientation toward the plight of all African people (continental and diasporan)" (p.

[41] Table 2 provides a summary of the scales introduced below.

[42] The four stages were then referred to as (1) pre-encounter, (2) encounter, (3) immersion, and (4) internalization (Helms & Parham, 1996, pp. 171).

242); and (6) Third World responses exhibit “an orientation toward the plight of all oppressed people regardless of race” (p. 242).

Another line of research has focused on the concept of the Black nationalist ideology and authoritarian coping style, which have been defined as “rejection of Eurocentric institutions and products and the effort to support corresponding Black institutions, an authoritarian style in which the individual takes a blind leap of faith into some predetermined lifestyle” (Harrell, Malone-Colon, & Harris, 1996). To assess the constructs, several psychometric scales have been developed: The *Black Ideology Scale* (BIS; Terrell & Taylor, 1996) consists of twelve subscales that can be assigned to four categories (philosophical goals, cultural goals, ethics, and economic strategies). Most interesting for the present study are the three subscales from the category ethics: 1) The subscale *establishment of laws* assesses “the extent to which Blacks feel that new and relevant laws are required for the Black community” (Terrell & Taylor, 1996, p. 308); 2) the subscale *opposition to existing laws* reflects “the extent to which Blacks oppose existing laws” (p. 308); 3) the subscale *opposition to integration* assesses “the extent to which Blacks reject the notion of being governed by Whites and the extent to which they accept the notion of being governed by militant Blacks” (p. 308). Moreover, Harrell et al. (1996) developed the *Black Nationalism Scale* that is composed of four dimensions: 1) The institutional dimension assesses “attitudes about institutions and institutionalized values that are based on White supremacy” (Harrell et al., 1996, p. 402); 2) the afrocentric dimension focuses on “the extent to which Black cultural pride and African nationalism are celebrated” (p. 402); 3) the collectivism/ socialism dimension is concerned with “one’s sense of the importance of collective responsibility and community good” (p. 402); and 4) the system understanding dimension is defined as the “extent to which the individual has developed an understanding of the role economic and political forces play in supporting racism on a national and international level” (p. 402). Table 2 provides a summary of the presented scales and their respective contexts of application.

TABLE 2: Psychometric scales assessing cognitive responses to minority status.

Scale	Conceptualization	Application
Collective Self-Esteem Scale (CSES; Luhtanen & Crocker, 1992)	- English - 16-item scale	- measures aspects of the self-evaluation of a person's social identity - validated in U.S. mixed-race undergraduate student sample
Racial Identity Attitude Scale (RIAS; Helms and Parham, 1996)	- based on Milliones' stages of the Black consciousness (1973) - English - 50-item scale	- measures developmental stages of Black consciousness - validated in random U.S. African American sample
Black Personality Questionnaire (Ajani ya Azibo, 1996)	- English - 50-item scale	- measures six types of the Black personality - validated in U.S. African American college student sample
Black Ideology Scale (BIS; Terrell & Taylor, 1996)	- English - 111-item scale	- measures identification with aspects of the Black nationalist ideology - validated in U.S. African American high school student sample
Black Nationalism Scale (Harrell et al., 1996)	- English - 63-item scale	- measures components of Black nationalism - validated in U.S. African American undergraduate student sample

2.2.3 Behavioral responses

Behavior is defined as any physical activity of an organism that, oppositely to intra-psychic processes, can be objectively determined by other observers (Häcker & Stapf, 1998). Somewhat misleadingly, Paradies (2006) differentiated inner- and outer-directed behavior. The subsequent paragraphs focus – in line with the formal definition – on outer-directed, observable behavioral responses to discrimination. The focus lies on stereotype confirming behavior, counter-stereotypical behavior, and John Henryism.

Some authors have highlighted that a tendency to system-justification may prompt engagement in stereotype confirming behaviors in minority group members (Jost & Banji, 1994). Specifically, the authors proposed that "stigmatized groups may begin to act in such a way that other people's negative expectancies of them are supported, thereby ensuring their continued subordi-

nation" (p. 17). Oppositely, the defensive self-presentation hypothesis (Boye & Miller, 1968) states that minority group members would react with counter-stereotypical behavior (e.g., self-enhancement) if confronted with discrimination. This behavior is exhibited as result of the perception that the group's stereotype is the cause for personal difficulties and thus the minority member seeks to differentiate her-/ himself from such behavior or refuting the stereotype as inaccurate.

This perspective is supported by empirical research concerning John Henryism, a construct building on the legend of John Henry, the "steel-driving man" (James, 1996, pp. 420). The *John Henryism Scale for Active Coping* (JHAC12; James, 1996) assesses the three mutually reinforcing themes defining the concept John Henryism: (1) Effacious mental and physical vigor, (2) a commitment to hard work, and (3) a single-minded determination to achieve one's goals. The scale is comprised of 12 items and was validated in a sample of U.S. Americans of African and European descent.

2.2.4 Affective responses

Affect has been defined as an emotional drive that is often accompanied by strong expressive deeds (Häcker & Stapf, 1998). Most authors with an interest in affective responses to RED focus on immediate reactions to perceived discrimination that are not of concern for this study. The following paragraphs introduce two major concepts that correspond to the notion of habitual affective responses to discrimination: *Cultural mistrust* and *ethnic pride*.

Terrell and Terrell (1981)[43] proposed the concept of cultural mistrust that specifically relates to the anticipated tendency of African Americans to be suspicious of, and to be cautious in their interactions with dominant group members. The authors provide a psychometric measure – the *Cultural Mistrust Inventory* (CMI) - to assess four domains, in which African Americans frequently exhibit distrust of Whites: 1) Education and training, 2) interpersonal relations, 3) business and work, and 4) politics and law. The 48-item measure has been validated in a college sample of U.S. African Americans. Empirical evidence for increased mistrust as a result of RED has been provided, and was most pronounced in the subscale interpersonal relations (Thompson, Neville, Weathers, Poston, & Atkinson, 1990).

Ethnic pride[44] has been conceptualized as the individuals' "positivity of their collective identity" (Luhtanen & Crocker, 1992, p. 303)[45]. Some authors have suggested that this concept evolves

[43] The equivalent concept has also been referred to as *healthy cultural paranoia* (Grier & Cobbs, 1968), or *eco system distrust* (Triandis, 1976).

[44] The equivalent concept has also been referred to as *race pride* (Harris-Britt, Valrie, Kurtz-Costes, & Rowley, 2007), *collective self-esteem* (Luhtanen & Crocker, 1992) or *ethnic self-esteem* (Cassidy, O'Connor, Howe, &

during the racial socialization process in minority group members and helps buffering from negative effects of the conflictive task to develop a positive social identity, despite of being subjected to ingroup devaluation by dominant group members (Harris-Britt, Valrie, Kurtz-Costes, & Rowley, 2007). Empirical evidence was provided suggesting that ethnic pride moderates the relationship of perceived discrimination and general outcomes like self-esteem, anxiety, and depression in minority group members (Cassidy, O'Connor, Howe, & Warden, 2004; Harris-Britt et al., 2007).

2.3 Summary

Chapter 2 has introduced three perspectives to the conceptualization of responses to RED: Approaches from the stress research, typological approaches, and empirical approaches with a focus on responses to discrimination. It was demonstrated that a major contribution to the understanding of the minority experience of discrimination has come from stress research. General types of stressors and those with a specific reference to discrimination or racism were differentiated, and approaches presented that adapted classical stress theories to the specific stressor of racism/ discrimination. Moreover, it was dealt with the question whether and how the stressful experience of discrimination is linked to the well-being in people with minority group status.

The typological models differentiated response patterns, while oppositely the descriptive approaches focused on cognitive, affective, and behavioral variables as responses to RED. The three approaches will be taken up again in chapter 4 (Introduction), where they are integrated as the principle components to the proposed TRAM-model.

Warden, 2004). It was decided to speak of ethnic pride to stress the affective over the cognitive components of the concept, and to clarify that group identity is defined by the individual's cultural background.

[45] The concept is based on Social Identity Theory (Tajfel & Turner, 1979), which proposed that an individual's self-concept comprises a personal identity and a social identity. A positive self-concept on an individual basis is referred to as personal self-esteem, while on a collective basis one speaks of the terms introduced above.

3. Cross-cultural research

In the following chapters, we move on to major questions concerning cross-cultural research. First, the focus is laid on the two theoretical approaches to cultural studies, the emic and etic perspectives. It is then discussed, what methodological problems can arise when data are compared across cultures, and how they can be addressed. Finally, we focus on the topic of adapting psychometric instruments into another language format.

3.1 The emic and etic perspective

If a construct is compared across cultures, the question arises whether this procedure is appropriate and possible from a scientific perspective. In particular it may be asked whether the construct under investigation is specific to a culture or common across cultures. This precise question is the object of the debate on the emic[46] versus etic[47] perspective.

Having its roots in linguistic studies (Pike, 1967), the emic/ etic approaches received a more general interest, when Berry (1969) transferred them into the field of cultural studies. What Berry labeled the emic approach – also referred to as the within-approach – puts the focus on the specific functionally relevant aspects within a defined cultural context. The etic approach – also labeled the across-approach – focuses on universally valid constructs across cultures. In the psychological discipline, the emic perspective provided the basis for the afterwards developed indigenous/ cultural psychologies, while the etic perspective found its scientific imprint in cross-cultural psychology (Berry, 2000, p. 200). Some authors highlighted the correspondence of the emic/ etic distinction to the ideographic/ nomothetic division known from Personality Psychology (Helfrich, 2003). While the ideographic approach intends to understand individuals in their uniqueness, the nomothetic approach searches for descriptive systems and causal explanations that can be generalized for all individuals (p. 117). On the level of cross-cultural studies, the emic approach is conceptually related to the ideographic approach, while the etic approach has conceptual similarity to the nomothetic approach.

[46] The term emic is linguistically derived from the antecedent concept in linguistic studies phonemic that refers to vocal characteristics contributing to semantic differentiation within an investigated culture (Pike, 1967).

[47] The term etic is linguistically derived from the term phonetic that refers to vocal characteristics allowing a description of the linguistic inventory across all languages (Pike, 1967).

The emic approach provides some central advantages over the etic approach: It helps gaining insight into the construction of a particular culture, assists in identifying central psychological constructs and subtle differences, and it allows progress in the science of behavior (Berry, 1989, pp. 723). Yet, in many cases, researchers may not end their investigation after having gained an understanding of a particular culture, but may wish to produce comparative frameworks across cultures, discover universals of the human experience, and provide valid psychometric measures applicable across cultures.

This is the precise advantage of the etic approach over the emic approach: It allows to develop broad perspectives about cultural characteristics that account for similarities and differences between cultures. It is often seen as the only way of starting an analysis as it provides a rough idea about a phenomenon, and it often meets practical demands of the scientific process like financial and time pressures (Berry, 1989, p. 723). However, the transfer of a psychological construct into another culture may constitute an invalid basis of cultural comparison as it may result in what Berry labeled *imposed etic* (p. 726)[48]. Oppositely, the valid generalization of a concept across cultures has been labeled *derived etic* (p. 727).

In the same article, the author agreed with Pike (1967) about the notion that "emic and etic standpoints do not form a dichotomy" (p. 724), but could be integrated within an operational framework of research in comparative cultural studies. Specifically, Berry proposed that this integrative process can be depicted in five separate steps (Figure 6): 1) Initially, a concept is studied within the researcher's own culture, and emic insights are gathered. 2) The same concept or instrument is used in another culture (*imposed etic*), resulting in either 3) an emic approach into that culture, or 4) directly the comparison of both emics. 5) As a result, the researcher may find 5.1) that a comparison is not possible, or 5.2) that a comparison of the two cultures is possible, and generalizations with regard to aspects of the construct are valid (*derived etic*).

In a similar attempt of integrating the emic and etic approaches, Triandis and colleagues (Triandis, Malpass, & Davidson, 1971; Davidson, Jaccard, Triandis, Morales, & Diaz-Guerrero, 1976) proposed three stages in the research process: 1) The researcher identifies an etic construct that is proposed to have universal status; 2) emic entries of assessing the construct in each culture are developed and validated; 3) a cross-cultural comparison of the construct is undertaken. This proposal opts for a practice, in which the conceptual model is based on etic considerations, while operationalizations are emic.

[48] Triandis (1971, p.6) referred to the invalid generalization of a construct as *pseudoetic* or *false etic*.

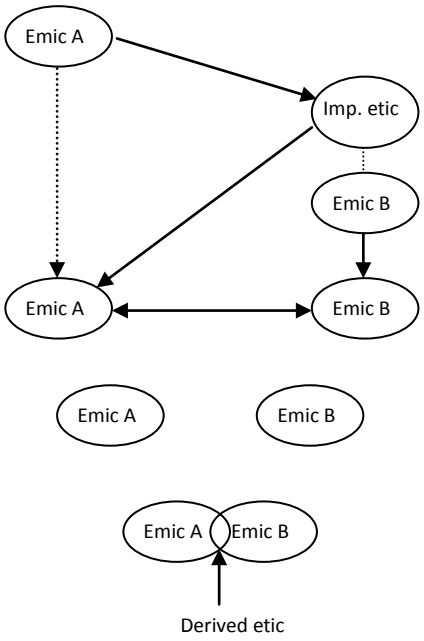
Step	*Research activity*	*Culture A (Own)*	*Culture B (Other)*
1.	Begin research in own culture		
2.	Transport to other culture		
3.	Discover other culture		
4.	Compare two cultures		
5.1	Comparison not possible		
5.2	Comparison possible		

FIGURE 6: Process of operationalizing emics and etics

(Source: Berry, 1989, p. 730).

3.2 Comparability of psychometric data

A major issue of cross-cultural research is concerned with the question, how the investigated construct should be operationalized. The advise of Triandis and colleagues (Triandis et al., 1971; Davidson et al., 1976) that the operaltionalization needs to be specific to the cultures under investigation (i.e., follow the emic approach) unquestionably represents a useful rule of thumb. However, it neither reflects the reality of current cross-cultural research, nor does it present an optimal solution for how a cross-cultural study can be successfully conducted.

Poortinga (1989) introduced two central concepts to cross-cultural research: Equivalence and bias. The author states that "data are equivalent when an observed cross-cultural difference on a measurement scale[49] is matched by a corresponding difference in the comparison scale[50]" (p. 738). Oppositely, the term bias in cross-cultural research refers to "a lack of correspondence between

[49] The term measurement scale refers to a scale that measures a construct of interest (Poortinga, 1989, p. 738).

[50] The term comparison scale refers to a cross-culturally identical or invariant scale that is hypothetical in nature (Poortinga, 1989, p. 738).

the observed scores of subjects from different cultural populations and the domain of generalization" (van de Vijver & Poortinga, 1997, p. 29).

Van de Vijver and Leung (1997) differentiate three levels of equivalence: 1) *Construct equivalence* is provided if the applied instrument measures the same construct in the investigated cultures. The psychometric measures applied need not to be identical. 2) *Measurement equivalence* can be inferred if the units of measurement are identical. Because the origin of the applied scales may not be common, only differences of scores can be compared across cultures, while the scores themselves can only be compared within a culture. 3) *Scalar equivalence* is assumed if the applied tests show an identical unit of measurement and a common origin and, hence, allows the direct comparison of scores within and across cultural groups.

The same authors notice that in many cross-cultural studies researchers claim scalar equivalence if construct equivalence has been established by an exploratory factor analysis. Presenting a rival conceptualization to the hierarchically organized levels of equivalence van de Vijver and Leung (1997) suggest that the level of equivalence is usually unknown in empirical studies and should rather be established than assumed.

Similar to the concept of equivalence, three levels of biases have been proposed (van de Vijver & Leung, 1997)[51]: 1) *Construct bias* is diagnosed if the construct under study is not identical across the investigated cultural groups. 2) *Method bias* occurs if the cultural factor affects test items in a differential way across cultures. 3) *Item bias* (also referred to as *differential item functioning*) refers to anomalies of individual test items. On the level of method bias and item bias, the authors further differentiate between uniform bias[52] and nonuniform bias[53]. Figure 7 illustrates the hierarchical organization of equivalence and bias.

[51] A list of potential causes for biases on the three levels is provided in Appendix A-1.
[52] Uniform bias is diagnosed, if the same bias appear on all score levels.
[53] Nonuniform bias refers to bias that are not identical over the score levels.

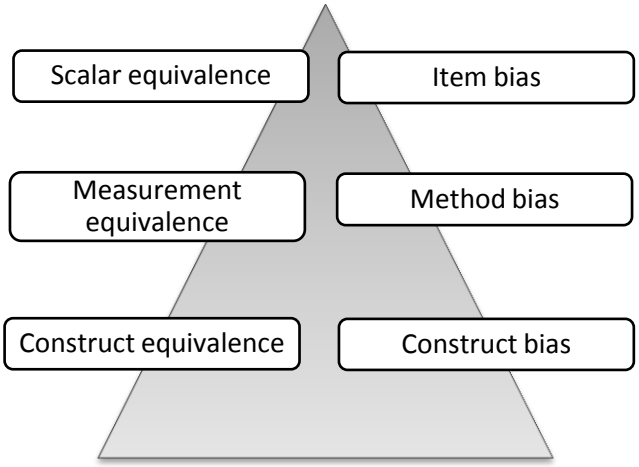


FIGURE 7: Levels of equivalence and bias in cross-cultural data.

Equivalence and bias are closely related constructs and described by van de Vijver and Leung as being "the opposite of each other; scores are equivalent when they are unbiased" (1997, p. 7). More specifically, a construct bias will jeopardize equivalence on all levels. A method and item bias will not affect construct equivalence, because score comparisons are not allowed on that level. A uniform bias on method and item level will not affect measurement equivalence, as they can be balanced if a constant is introduced. A nonuniform bias will not affect construct equivalence, but measurement equivalence will be lost. Scalar equivalence is troubled in the presence of any type of biases. A summary about how the level of equivalence is affected by bias is provided in Table 3.

TABLE 3: Effects of bias on equivalence
(Source: Van de Vijver & Leung, 1997, p. 21).

		Level of equivalence affected		
Type of bias		*Construct*	*Measurement*	*Scalar*
Construct		no	no	no
Method	*uniform*	yes	yes	no
	nonuniform	yes	no	no
Item	*uniform*	yes	yes	no
	nonuniform	yes	no	no

Poortinga (1989) proposed four strategies, how inequivalent data and biases can be dealt with: 1) The *precluding comparison* interprets inequivalent data as an indicator that a comparison is not meaningful. 2) The *reduction of inequivalence strategy* demands to eliminate biased items. 3)

Interpreting equivalence claims that inequivalence is potentially informative and can be used in inquiring the nature of cross-cultural differences. 4) The *ignoring inequivalence strategy* refrains from paying attention to the issue.

3.3 Translation of psychometric instruments

A major task in many cross-cultural studies is the translation of psychometric instruments into another language format. Van de Vijver and Leung (1997, pp. 35) claim that good translations are crucial to ensure the validity of a psychometric scale[54].

Three options have been proposed about how psychometric instruments can be translated (van de Vijver & Leung, 1997): 1) An instrument is *applied* if a literal translation from the original version is generated. 2) The procedure of *adaptation* refers to the literal translation of a set of items, while some items are changed in wording or content in order to enhance the appropriateness of the linguistic format in the new cultural context. 3) The *assembly* strategy requires that a new instrument is developed to adequately capture the construct in another cultural group.

Which of these options needs to be chosen by the investigator depends on the kind of bias that is of major concern in the context of study. If, for example, only few items are expected to exhibit cultural idiosyncrasies, an assembly may overstretch the investigator's time and financial resources, and additionally restrain opportunities for cross-cultural comparisons. An application strategy, however, may result in stilted language reducing readability, and potentially cause item bias. Adapting the instrument in this case appears the optimal choice, as it allows considering cultural particularities, while maintaining enough similarity to the original language version for direct cultural comparisons.

To assure the accuracy of translation, various techniques have been proposed. The three most commonly used ones are expatiated by van de Vijver and Leung (1997). 1) The *translation-backtranslation procedure* requires that the original instrument is translated into the target language, after which a second (group of) interpreter(s) independently translate(s) the text back into the original language format. Major differences between the two obtained text versions point to translation problems. 2) The *decentering approach* involves the removal of words and concepts from the original text version that pose difficulty in the translation or are culture specific. Consequently, the original instrument is retrospectively changed to increase its translatability. 3) The *committee approach* demands that a group of bilinguals translate and adapt the instrument. The

[54] Appendix A-1 illustrates that an inadequate translation of a scale may constitute a major source of item bias.

obtruding strength of this third approach lies in the combination of utilizing individual expertise and cooperative effort. For example, some members of the committee may have specific knowledge of linguistic and cultural particularities of the group under study, while others contribute their academic expertise in aspects related to the construct under investigation or psychometric measurement. If the investigator actively participates in the committee, this approach yields rigorous tests assuring cultural adequacy and a high scientific standard. A number of guidelines have been proposed concerning the question, how items should be formulated to optimize their readability and translatability[55].

4. Critique and integration

The following chapters inquire about the deficiencies of the existing scientific literature and provide a conceptual model that aims to close existing gaps. The first chapter begins with a critique to the presented conceptual approaches about responses to RED. The second chapter introduces the TRAM-model, a new account that presents an integrative psychological approach to the field. The model is extended by facets of responses to discrimination that are introduced in the third chapter.

4.1 Critique to existing approaches

Conceptualizing discrimination within the framework of stress theories helps to understand the relationships between the stressor (i.e., discrimination), and the person being subjected to it. However, many questions concerning this approach still remain unanswered as only few researchers have investigated this topic. As a result, the proposed stress models remain vague about the involved psychological variables in the psychological processes. Specifically, few accounts are provided that have a focus on the specific coping responses to RED.

With regard to the typological approaches, it is focused on the model proposed by Simpson and Yinger (1987) as it is more conclusive and relevant to the present study compared to Farley's model. The model intrigues for its holistic view upon human experiences, but exhibits conceptual deficiencies: 1) The definition of response types implies that people exhibit a stable pattern of responses to discrimination, but it fails to provide a conceptual basis for this assumption. It could be

[55] A guideline was being provided by Brislin (1986; Appendix A-2).

alternatively proposed that responses to discrimination exhibit variability over an individual's life-span, for which the proposed response types cannot account. 2) The model is conceptually unbalanced. For example, the authors assume that the types are not independent, but a clarification about their relationship is missing. Furthermore, the typological approach lacks conceptual embedment. The view that discrimination (= cause) leads to some typological response (= effect) may be over-simplistic. 3.) Latent psychological variables of the individual (e.g., aggression) or the group (e.g., militancy) are manifest through observable behaviors in the individual (e.g., individual verbal attack) or the group (e.g., revolt). A number of theoretical questions arising from such a conceptualization remain unanswered. It is not clear whether the latent variables in the individual constitute state or trait characteristics, and what their intrapsychic source is (e.g., aggression = emotional, reform = cognitive?). It may be a simplification of psychological processes to assume that manifestations of latent characteristics are generally behavioral in nature as the authors apparently assume. No explanation is provided, how individual latent characteristics translate into latent group characteristics, or how individual or group action arises.

The descriptive approach offers an abundance of aspects relevant to the study of responses to discrimination, and for some of these aspects empirical evidence has been provided. However, the conceptual embedment of these aspects remains insufficient with only few being positioned within scientific hypotheses, and even fewer within a general theoretical framework. Consequently, the descriptive approach provides fragments of the human experience and behavior, but requires a broader theoretical basis that still lacks from the literature.

4.2 The TRAM-model

The TRAM-model explicitly draws from the approaches presented in chapter 2 (Introduction). The perspective that perceptions of RED present a specific social stressor provides the basic conceptual frame, the typological accounts the structure, and the empirically drawn aspects define some of facets of TRAM. It is assumed that RED constitutes a specific environmental stressor to the individual in the sense that the various forms of discrimination potentially stretch over the whole continuum of pervasiveness, respectively from mild hassles to life threatening traumata, and that the time of exposure expands over an individual's life span, rather than being temporary.

TRAM explicitly builds on the transactional theory of stress by Lazarus and Folkman (1984). However, responses to the stressor reflected by TRAM expand over emotional reactions and coping responses. A response loop is hypothesized that is concurrent with Lazarus' and Folkman's *reappraisal*. However, it is additionally assumed that the repeated exposure to discrimination, and the

evaluation of one's response to it, eventually leads to a habitual pattern of responses to discrimination. Such response styles – although reflecting a certain temporal stability of an individual's response – show some degree of lifetime variability. This variability is accounted for by variables of the stressor and personal variables of the individual affected by it. It could be hypothesized that the proposed response styles converge into progressive developmental stages, similar to the stages Milliones (1973) has proposed for the concept of Black consciousness (chapter 2.2.2, Introduction). This idea, however, cannot be further elaborated here.

TRAM proposes four response styles to RED that are arranged alongside the poles of two dimensions: *Social group orientation* and *intrapsychic regulation*. The dimension social group orientation refers to an individual's general orientation towards the ingroup that may reflect *convergence* or *divergence*. The dimension intrapsychic regulation represents a psychological set of strategies and mechanisms that may lean towards *integration* or *disintegration*. The resulting four response styles are labelled *traditionalist style*, *revulsionist style*, *assimilationist style*, and *marginalist style*, with the first letters of the four response styles providing the acronym TRAM as a name for the proposed model[56]. The four styles are derived from non-systematic observations of the author in the examined cultural groups, the qualitative studies in Australia and Chile (Mellor, 2003; Merino et al., 2009), and the approaches and empirical findings that have been reported in chapter 2 (Introduction).

The traditionalist style is characterized by responses that aim to preserve ingroup culture, group identity, and relationships with ingroup members. The traditionalist seeks to compensate the experienced conflictive relationship with the dominant group through retreat into the filial bonds of ingroup culture, and withdrawal from outgroup influences. The perceived progressive destruction of ingroup culture is acted against through fostering ingroup community life and traditional values.

The revulsionist style is conceptually distinct from the traditionalist style in the sense that it reflects a destructive rather than a constructive response pattern. Revulsionists are characterized by a strong sentiment of personal devaluation and social disadvantage caused by their group membership, which they seek to compensate through affront with the outgroup. Although the revulsionist solidarizes with the ingroup, the defining pattern of responses lies on disfavoring the outgroup rather than favoring the ingroup. The revulsionist style is disintegrative in the sense that a positive social identity regarding the racial/ ethnic group membership cannot be achieved, and particular responses are destructive of the personal development, interpersonal relations, and the social system. The force of action that is potentially exerted by revulsionists may, however, promote social recognition of the minority group within a society.

[56] The model is depicted in Figure 9.

The assimilationist style is characterized by a break with ingroup norms, practices, and personal bonds featuring a diverging social group orientation. Instead, the assimilationist unconditionally affiliates with the dominant group, shares mainstream morals, world views (including the denial of racism), and life concepts. The response is integrative in the sense that the assimilationist style promotes the development of a stable social identity anchored within the majority group, but also because it lacks animosity against the ingroup that goes beyond the personal delimitation from the ingroup in order to gain personal recognition from the outgroup. The assimilationist seeks to compensate the stigma of being related to the devalued minority group through extensive professional striving that eventually results in the absorption within mainstream culture.

The marginalist style conceptually overlaps with the assimilationist style in that it lacks ingroup bonds and affiliations. Other than the assimilationist, the marginalist has not integrated within the social mainstream and, therefore, presents a socially alienated individual. The disintegrative tendencies are primary directed against the ingroup, which the marginalist confronts with hostility and devaluation. The destructive tendencies are also exerted against the own person by health-damaging substance abuse, pathological gambling, suicidal attempt, and so forth. Generally having difficulty with regard to the social and personal development, the marginalist lives in a vacuum of bare survival and appears a "phantom" to society. The marginalist is assumed to be the response style most vulnerable to psychological and physical pathology.

To the extent of proposing four response modes, TRAM resembles the typological approach of Simpson and Yinger (1987), but simultaneously avoids some of that model's deficiencies: 1) Rather than response types, TRAM proposes response styles reflecting a habitual instead of an endogen conceptualization of responses to discrimination. The model, consequently, accounts for intra-individual life-time variability of responses to discrimination to a greater extent than the typological approach. 2) Because TRAM is conceptualized along two dimensions, the four response styles stand in a predefined relationship: Those response styles being arranged opposite to each other are conceptually contradictory, while adjacent response styles reflect contrary concepts. 3) It is acknowledged that the proposed styles constitute prototypes; individual adaptation to RED doubtlessly shows more variance than the four styles can depict. For example, an individual may exhibit a situational shift between a traditionalist response (when among ingroup members) and an assimilationist response (among outgroup members). Alternatively, an individual may simultaneously exhibit responses reflective of two (or even various) styles. For example, although forming social contacts mainly to ingroup members and practicing cultural traditions characteristic of the ingroup (= traditionalist style), an individual may express opinions undermining the ingroup's social status like the denial of the existence of racism (= assimilationist style). The inconsistency of the human experience and behavior is accounted for by the dimensional conceptualization of the constructs, pro-

posing a continuum between the two poles, to which the individual may exhibit a stronger or weaker tendency.

4.3 Selection of facets

Subsequently, particular facets are attributed to the response styles to further define their internal structure and to make them accessible for operationalization and psychometric measurement. Thus, the aspects and concepts transmitted from the literature (chapter 2.2, Introduction) underwent a process of pre-selection and categorization.

A specific issue arises from the transferral of concepts from previous studies to the TRAM-model: The majority of concepts have been developed outside the populations investigated in the present study. Consequently, it may be questioned whether the transferred concepts were meaningful to the Aborigines and Mapuche, or – to speak with Berry (1989) – possibly constituted imposed etics. It has been insured through the primary selection of facets to the largest possible extent that only concepts were taken up that 1) were assumed to be meaningful in the populations under study, which was concluded from empirical and non-empirical observations within the two groups, and that 2) were hypothesized to be universal responses of indigenous minority groups to RED. It is acknowledged, though, that the linguistic expressions to the concepts may diverge across cultural contexts.

The general classification scheme of cognitive, behavioral, and emotional responses was preserved. However, concepts classified within the cognitive and behavioral domains remained diverse so further sub-categories were constructed. Due to the scarcity of relevant external sources, it became occasionally necessary to propose new facets that so far have not received scientific attention, in order to assure that the TRAM-model received an internally conclusive structure. In this case, conceptual considerations and the author's observations in the examined cultural contexts guided the process of model construction[57].

With regard to the cognitive domain, facets were organized within four categories: Racism awareness, group regard, alienation and group-related assumptions. Paradies (2006) and Harrell (1997b) proposed hypervigilance and denial as the two extreme forms of racism awareness. Furthermore, research concerning the personal-group discrepancy (Taylor at al., 1990) has suggested that a distinction between the awareness that one's ethnic group is the subject of racism, and the perception of oneself to be a target of racism needs to be drawn. Consequently, four facets were

[57] A hierarchical presentation of the categories and facets of the TRAM-model is provided in Figure 8.

proposed to that category: 1) *Racism consciousness*, which refers to the perspective that one's ethnic group is subjected to racism, 2) *racism vigilance*, which is the perception that oneself is targeted by racism, 3) *racism denial* that disregards the existence of racism against one's ethnic group, and 4) *racism ignorance*, which refers to the denial to be personally targeted by racism. With reference to the four response styles of TRAM, it was proposed, first, that racism awareness (person-related and group-related) reflected a response typical of the two styles representing the pole convergence on the dimension social group orientation, while an absence of racism awareness was attributed to the two response styles at the pole divergence on this dimension. Second, it was proposed that stressing the group component over personal affectedness would dominate in the two styles representing the pole integration on the dimension intrapsychic regulation, while the two response styles reflecting disintegration would be characterized by a personal rather than a group perspective. Consequently, the traditionalist style was assigned the facet racism consciousness, the revulsionist style the facet racism vigilance, the assimilationist style the facet racism denial, and the marginalist style the facet racism ignorance.

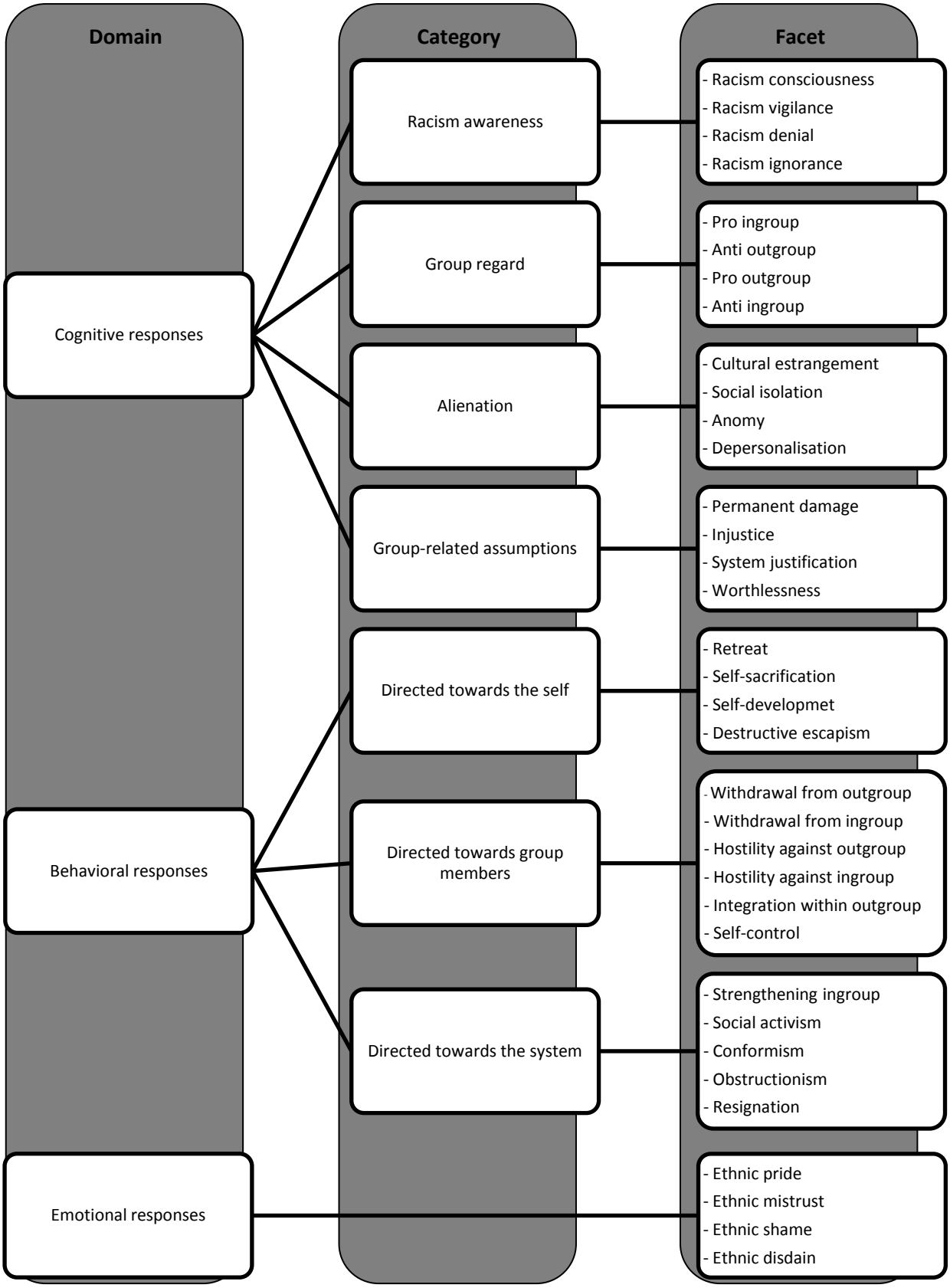


FIGURE 8: Hierarchical order of facets in the TRAM-model.

The category *group regard* predominantly draws from the construct Black consciousness proposed by Ajani ya Azibo (1996). Four general perspectives are proposed to reflect the category: 1) *Pro ingroup* referring to a positive regard an individual holds towards the ethnic group[58], 2) *anti outgroup* reflecting negative regard for the dominant group, 3) *pro outgroup* expressing positive regard for the dominant group, and 4) *anti ingroup*[59] reflecting negative regard for one's ethnic group. It is further proposed that positive responses (i.e., "pro"-facets) are representative of the pole integration, and directed towards the group, to which the individual has developed a social identity. Negative responses (i.e., "anti"-facets) are assigned to the pole disintegration, and the response is directed towards the group an individual opposes. The traditionalist style was, consequently, assigned the facet pro ingroup, the revulsionist style the facet anti outgroup, the assimilationist style the facet pro outgroup, and the marginalist style the facet anti ingroup.

As has been noted before, the category *alienation* is proposed to reflect a syndrome that is characteristic of the marginalist style. Four facets drawn from the general alienation research have been integrated into TRAM: 1) *Cultural estrangement* as "an individual's rejection of, or sense of removal from, dominant social values" (Cozzarelli & Karafa, 1998, p. 253), 2) *social isolation* as a "loss of a sense of community and/ or social ties" (Cozzarelli & Karafa, 1998, p. 253), 3) *anomy* as a non-understanding of group or social standards (Dean, 1961), and 4) *depersonalisation* as self-estrangement (Cozzarelli & Karaffa, 1998), or personal disorganisation (Dean, 1961).

It is further proposed that particular assumptions or world views may develop in response to discrimination. An extensive body of research has been developed around the concept of *system justification* (Jost & Banaji, 1994), that is the belief in the "integrity of an existing social system" (Jost & Burgess, 2000, p. 294), which finds a specific reflection in ideas like individual upward mobility, the protestant work ethic, or the survival of the fittest. Trauma psychology provided further concepts regarding a person's group-related assumptions: It has been proposed that an individual's basic assumptions – like perceiving the world as essentially benevolent, meaningful, and one's self worthy – are challenged by the experience of a psychological trauma (Janoff-Bulman, 1989). As a result, shattered assumptions – such as the perception of personal unsafety, injustice of the world, the world as a malicious place, and of personal deservingness of "bad fate" – develop (Macy, Barry, & Noam, 2003). Both approaches, the research on system justification and shattered assumptions, were integrated into TRAM. Two basic concepts were proposed to reflect basic group-related assumptions of devalued group members: Worthiness (or valueableness) of one's culture and justice (or benevolence) of the general social system, with one of the concepts being either present or absent in each response style: 1) *Permanent damage*, the perspective that one's own culture is

[58] The facet resembles the coping style *affiliation* on Harrell's EC subscale (1997).
[59] The facet resembles the coping style *rejection of own group* on Harrell's EC subscale (1997).

valuable, but has experienced cultural disruption, was assigned to the traditionalist style; 2) *injustice*[60], the assumption that the social system lacks justice, was assumed to be characteristic of the revulsionist style; 3) *system justification*, the belief that the social system is essentially just and benevolent, was assigned to the assimilationist style; and 4) *worthlessness*, which reflects the assumption of a lack of value of ingroup culture is proposed to be an attribute of the marginalist style.

Within the behavioral domain, the proposed facets were reflected within three categories: *Responses directed toward the self*, *responses directed toward group members*, and *responses directed toward the system*. Referring to the category responses directed toward the self, a direct reference has come from the concept of John Henryism (Whitfield et al., 2006). Another indication of self-directed behavioral responses to discrimination is related to self-harming activities observed to some frequency in minority group members. Following these two approaches, an auxiliary framework was constructed differentiating constructive versus destructive responses and of escapism versus activism. As the result of integrating both concepts the four facets were determined: 1) *Retreat* was defined as a form of constructive escapism that involves participation in cultural practices of the ingroup and was assigned to the traditionalist style; 2) *self-sacrification* referred to a form of destructive activism that includes total life commitment to prevent one's own group from social destruction and was proposed to represent the revulsionist style; 3) *self-development* constituted the TRAM-adapted concept of John Henryism, which referred to a form of constructive activism, and involves effacious work and determination to goal achievement, a facet proposed to be reflective of the assimilationist style; and 4) *destructive escapism*[61] involved potentially self-harming activities – like substance abuse, pathological gambling, or suicide attempt – and was assigned to the marginalist style.

The category responses directed toward group members is conceptually related to Simpson and Yinger's typological model (1987) and Harrell's COP-subscale (1997b). Simpson and Yinger proposed that minority group members respond to the discrimination they experience with avoidance that potentially involves withdrawal from either the outgroup or the ingroup, and aggression that is manifest through hostile behavior against either the outgroup or the ingroup. Furthermore, Harrell introduced the facet duality/ compartmentalization as a form of controlled behavior in the presence of outgroup members, and assimilation that reflects behavioral conformity among outgroup members. These aspects are integrated into TRAM and it is proposed that: 1) *withdrawal from the outgroup* as an avoidance of contact with outgroup members is reflective of the traditionalist style;

[60] An equivalent conception is proposed in the facets Paradies' (2006) labelled *system blame* or *rejecting dominant ideology*, and the subscale *opposition to existing laws* of the BIS (Terrell & Taylor, 1996).
[61] The facet *destructive escapism* has conceptual overlap to *stereotype confirming behaviour* (chapter 2.2.3, Introduction).

2) *hostility against the outgroup* referring to aggressive behaviors directed against outgroup members is expressive of the revulsionist style; 3) *withdrawal from the ingroup* as the avoidance of contact with ingroup members, and *integration into the outgroup*[62] as an attempt to assimilate with the outgroup are characteristic of the assimilationist style; and 4) *hostility against the ingroup* reflecting aggressive behaviors directed against ingroup members and *self-control*[63], a mimicry strategy represented by behaviors that aim to conceal the minority decent, are the corresponding facets of the marginalist style.

Concerning the behavioral category responses directed toward the system, the literature provides the concepts *activism* (Harrell, 1997b) and *reform* (Simpson & Yinger, 1987) as efforts to change the social system. A general reference was provided by the typology of Black awareness provided by Ajani ya Azibo (1996), who differentiated pro-White, pro-Black, anti-White, and anti-Black awareness (among others). With regard to TRAM, it is proposed that: 1) the facet pro ingroup would foster systemic action oriented toward *strengthening the ingroup* within the existing system[64], a new facet assigned to the traditionalist style; 2) an anti outgroup response would converge into *social activism*, a characteristic facet of the revulsionist style; 3) a pro outgroup response is proposed to result in *conformism*, and blends into the assimilationist style; and 4) anti ingroup is assumed to provoke either *obstructionism* as an active response that aims to weaken the ingroup, or *resignation* as a passive response that reflects the perception that the envisaged destruction of ingroup culture has already occurred, both of which being reflective of the marginalist style.

Within the emotional domain, it is proposed that *ethnic pride*, which refers to the affective state of esteem that a person draws from her/ his ethnic group membership, is most characteristic of the traditionalist style. The concept *ethnic mistrust*, defined as suspiciousness of minority group members against dominant group members and institutions, is postulated to represent a facet characteristic of the revulsionist style. Furthermore, it was proposed that *ethnic shame*, conceptualized as embarassment a person connects with her/ his ingroup membership, is a facet characteristic of the assimilationist style. The facet *ethnic* disdain, i.e. contempt a person feels for other group members, was proposed to reflect an emotional state of the marginalist style. Figure 10 presents another illustration of the TRAM-model, in which the response styles and facets are circularily arranged along the two dimensions social group orientation (poles: Convergence vs. divergence) and intrapsychic regulation (poles: Integration vs. disintegration).

[62] The TRAM-facet integration resembles Harrell's (1997b) coping style *assimilation* in the RaLES.
[63] The TRAM-facet self-control resembles Harrell's (1997b) coping style *duality/ compartimentalization* in the RaLES.
[64] The definition implies that the TRAM-facet strengthening ingroup is conceptually related to Simpson and Yinger's *reformism*.

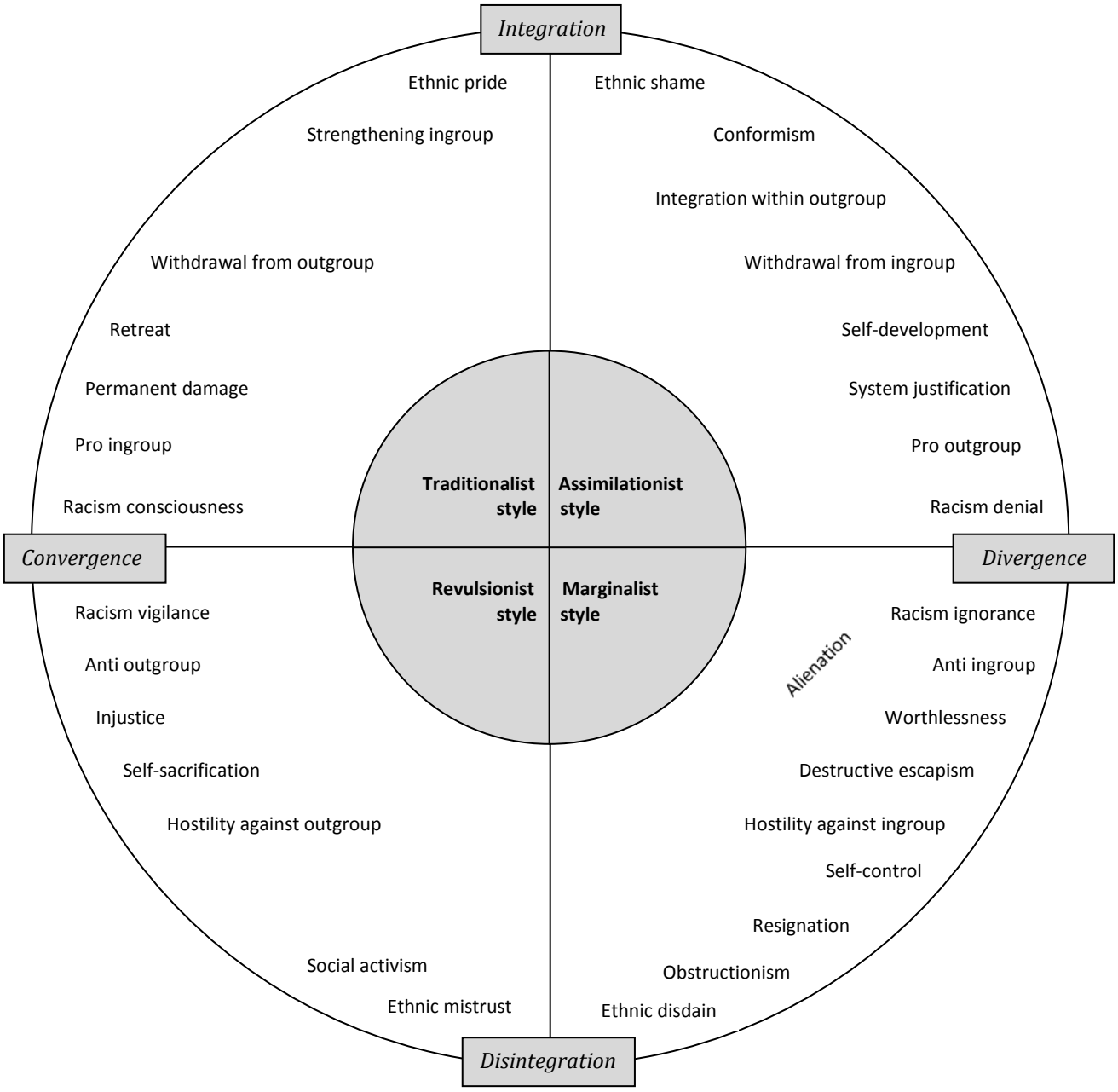


FIGURE 9: Circular arrangement of response styles and facets in the TRAM-model.

5. Rationale of empirical study

The following chapters provide an introduction to the empirical investigation and define the rationale of the inquiry. The first chapter clarifies the objective of the study that is the question to what end the investigation is undertaken and why the investigation is necessary. The second chapter provides a general methodological overview, how the quality of a psychometric scale can be statistically assessed. The third chapter outlines the scientific problem of the empirical investiga-

tion: The scientific questions as well as hypotheses are formulated to give clarity about what results are expected, and why they are expected.

5.1 Objective

The aim of the empirical investigation is to develop and validate a new psychometric scale – the Responses to Racial and Ethnic Discrimination Questionnaire (RDQ) – that assesses responses to RED in two indigenous groups, the Australian Aborigines and the Chilean Mapuche. Recent research has paid rather limited attention to the topic as concerns providing conclusive theoretical concepts as well as developing psychometric measures. The TRAM-model was a first step to address these shortcomings, the development and validation of the RDQ that is put forward in the upcoming sections and chapters, tackles the second major gap.

The level of scientific understanding about responses to RED does not yet correspond to the scientific and socio-political significance of the topic: Opening the field of responses to RED to the discipline increases our understanding about the subjective experience of discrimination in minority group members, provides an indication about the individual variability of responses, and helps to specify psychological factors of inter-group conflict. Additionally, it is noted that the range of investigated ethnic groups has been limited in the previous studies. A dominance of U.S.-African Americans, and various European and North American immigrant groups can be observed, while other ethnic groups have rarely been studied concerning the topic, and particularly indigenous people are underrepresented in the literature. The present study is, therefore, also a contribution to the Cross-Cultural Psychology of indigenous peoples.

5.2 Quality criteria of psychometric measurement

When a new psychometric instrument is developed, quality criteria need to be defined in order to ensure that the test is, in fact, applicable within a pre-defined context and capable to measure the construct it is designed for. The quality of the developed instrument is evaluated analyzing the test's small units (i.e., items) and large units (i.e., sub-scales or entire scales if the instrument measures just one concept). The small units are attended to in the process of item analysis. The procedure includes the general examination of distribution patterns, but also the determination of

item popularity (or difficulty)[65], homogeneity, and discriminatory power, that are addressed in the construction study, Australian Aboriginal study, and Chilean Mapuche study.

If the large units of a psychometric instrument are analyzed, criteria need to be defined that provide an indication of the quality of a psychometric scale. Reliability and validity are accepted to be the most important quality criteria (Mummendey & Grau, 2008, p. 100), and are the major focus of analysis in the Australian Aboriginal study and the Chilean Mapuche study.

Reliability informs about the exactness, to which a psychometric instruments measures a psychological characteristic, but does not recognize whether the proposed construct is measured (Lienert & Raatz, 1994, p. 9). Based on classical test theory, it is assumed that the observed test score results from a true score and an error score. The proportion of the true score on the test score defines a test's reliability (Asendorpf, 2007, p. 131). Accordingly, a test is completely reliable if results provided by a test person contained no measurement errors.

Test reliability is determined by the reliability coefficient. What the reliability coefficient explains depends on the methodological approach that is chosen. The literature frequently differentiates between two general principles of checking reliability (e.g., Mummendey & Grau, 2008): Internal consistency (e.g., Cronbach-α coefficient, Spearman-Brown coefficient) and temporal stability (i.e., re-test coefficient).

Test validity accounts for the accuracy, to which a test truly measures or predicts the psychological characteristic, it is designed to measure or predict (Lienert & Raatz, 1994, p. 10). According to this definition a test was entirely valid if the test result allowed a direct and perfect localization of the test person on a continuum reflecting the score value of some psychological characteristic.

Construct validity refers to the quality, to which the operationalization of a test reflects the underlying theoretical construct. Because this construct is usually not directly observable, additional empirical indicators need to be defined that allow an inference of the relationship between construct and test. Criterion validity has been conceptualized to be a specific aspect of construct validity (Asendorpf, 2007, p. 136). A test has criterion validity if test results highly correlate with external measures (= criteria) that are acknowledged to have construct validity. Another common procedure of assessing a test's construct validity is a factor analysis (referred to as factorial validity). A factor analysis helps to identify items that have high loadings on the same factor and, therefore, assists discovering internal structures, like subscales or facets, of a test (Fisseni, 1997).

[65] The original term item difficulty may appear adequate in relation to mental ability tests, but is somewhat misleading in the context of personality measurement (in a broad sense). Lienert and Ratz (1994, p. 73) proposed the unambiguous formulation item popularity as terminological substitute for an otherwise identical statistical procedure.

5.3 Problem and hypotheses

The two main tasks of the present study are to operationalize the facets proposed by the TRAM-model into items of a psychometric scale, and to test the reliability and validity of the obtained instrument. The following paragraphs split these main questions up into operationalizable scientific questions and explain, how the problems are approached. Furthermore, statistical hypotheses are formulated for the operationalized questions, where applicable.

1.) *How can the TRAM-model be transferred into a psychometric scale?*

This question is traced in the chapter 1 (study 1), in which the test conception and operationalization of the facets into test items is presented. Two empirical studies – the pretest and the construction study – concern the test development, and are exclusively devoted to the modification and selection of items that were provided in the scale construction. The following scientific questions are derived and operationalized:

a.) *Are the items readable? Are the items distressful for the respondents?*

In the pretest, this question is approached through a qualitative analysis of the respondents' evaluation of the questionnaire as assessed in a separate documentation sheet. The analysis of missing and invalid values provides an objective indication of "troublesome" items.

b.) *Do the items exhibit favorable distribution patterns?*

The distribution pattern is determined by the items mean, median, standard deviation, skewness, kurtosis, and an index indicating item popularity within the sample.

c.) *How well do the items conceptually represent the facet they are assigned to?*

This question is repeatedly reflected throughout all stages of test development and validation. In the stages of test development, theoretical considerations about an item's linguistic content present the primary basis for answering this question. A statistical indication is provided by the items' power index.

2.) *What properties does the final RDQ exhibit on item level?*

After the final version of the RDQ has been obtained as result of the test development procedure, the instrument undergoes two validation studies: The first study takes place in the original Australian context, where the scale was developed, and investigates a sample of Aboriginal people. The second inquiry is conducted in the context of Chilean Mapuche people. To eva-

luate the item performance of the final RDQ, various statistical indices are determined in both studies. Specifically it is asked:

a.) *Are items systematically omitted by respondents, or do responses diverge from the instruction?*
This question is addressed in the missing and invalid values analysis.

b.) *Do the items exhibit favorable distribution patterns?*
The distribution pattern is determined by the items' mean, median, standard deviation, skewness, kurtosis, and the item popularity index.

c.) *Do items exhibit inconsistent response patterns?*
Inconsistency is assessed in a scatter-plot analysis.

d.) *How well do the items statistically represent the facet they are assigned to?*
An indication of item representativeness is provided by the power index, item and subscale homogeneity as well as inter-item and inter-facet correlations.

3.) *Is the RDQ able to reliably assess the four response styles?*
In both validation studies, subscale reliability is indicated by coefficients measuring internal consistency (i.e., the Cronbach-α coefficient and the Spearman-Brown coefficient). Collecting re-test data was not possible due to time, staff, and monetary restrictions, but also because recruitment of participants was often coincidental and a second inquiry of the same participant to a predefined date unfeasible.
Resulting from the approach of a rationale scale development, reliability of the scale is assumed. The following statistical hypothesis is postulated:
→ *Hypothesis I*: The four RDQ-subscales demonstrate reliability coefficients > .80.

4.) *Are the four subscales of the RDQ able to validly measure the proposed underlying conceptual constructs?*
To estimate construct validity of the RDQ, the following scientific questions and hypotheses are formulated:

a.) *Does the RDQ exhibit factorial validity?*
Exploratory factor analyses are carried out for both validation studies over the four subscales as well as the total RDQ to get an indication of the RDQ's factorial structure.

Being based on a rational test concept, the test's content is assumed to follow an internal, conceptual logic. Hypotheses, nevertheless, remain somewhat unspecific and exploratory. The conceptual hypothesis postulates that the subscales reflect the proposed internal structure of the facets within the TRAM-model. With regard to the factorial structure, the following hypothesis is articulated:

→ *Hypothesis II*: The RDQ has a four-factor structure. The arrangement of facets with high loadings on the same factor reflects the arrangements of facets within the RDQ subscales.

b.) *Does the RDQ exhibit criterion validity?*

Relationship of response styles:

The TRAM-model proposes four response styles that conceptually present contrary and contradictory entities. Response styles diametrically opposing each other (= contradictory styles) are conceptually more distant than those response styles being horizontally or vertically (= contrary styles) arranged to each other (Figure 10). It is proposed that:

→ *Hypothesis III*: Contrary response styles (i.e., traditionalist ↔ assimilationist, traditionalist ↔ revulsionist, revulsionist ↔ marginalist, assimilationist ↔ marginalist) are uncorrelated, whereas contradictory response styles (i.e., traditionalist ↔ marginalist, revulsionist ↔ assimilationist) show significant negative correlations.

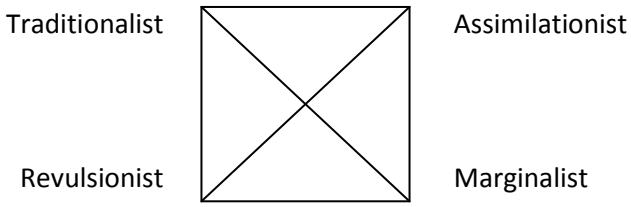


FIGURE 10: The contrary and contradictory response styles of the TRAM-model.

Relationship of response styles to perceived discrimination and life satisfaction:

In the Australian Aboriginal study, two additional instruments assessing constructs that are proposed to be specifically related to the response styles – perceived discrimination and life satisfaction – are correlated against the four subscales.

It is proposed that the construct perceived racism (operationalized by EXP-DM [Harrell, 1997b]) stands in a determined and specific relationship with each of the four response styles to discrimination. The strength and direction of the proposed relationship results from the category racism awareness in the TRAM-model: The response styles positioned at the conver-

gence pole of the dimension social group orientation (i.e., the traditionalist and revulsionist style) affirm the presence of racism. Oppositely, the response styles at the divergence pole (i.e., the assimilationist and marginalist style) negate racism. Additionally, the revulsionist style shows a strong tendency of affirming the personal affectedness by racism, which indicates a high correspondence to the concept perceived racism. Figure 11 illustrates the nomological network of the assumed relationship of constructs. The following hypothesis is postulated:

→ *Hypothesis IV*: The traditionalist and revulsionist styles show a significant positive correlation to perceived racism. The relationship is strongest in the revulsionist style. The assimilationist and marginalist response styles show a significant negative correlation to perceived racism.

Similarly, the construct life satisfaction (operationalized by the SWLS [Diener, Emmons, Larsen, & Griffin, 1985]) was proposed to stand in a specific relationship to the four response styles. It is postulated that the response styles located at the integration pole on the dimension intrapsychic regulation (i.e., the traditionalist and assimilationist style) affirm life satisfaction. Oppositely, the response styles positioned at the disintegration pole (i.e., the revulsionist and marginalist style) negate life satisfaction. Figure 11 illustrates the proposed relationships, as specified in the following hypothesis:

→ *Hypothesis V*: The traditionalist and assimilationist response styles show a significant positive correlation to life satisfaction, while the revulsionist and marginalist response styles show a significant negative correlation to life satisfaction.

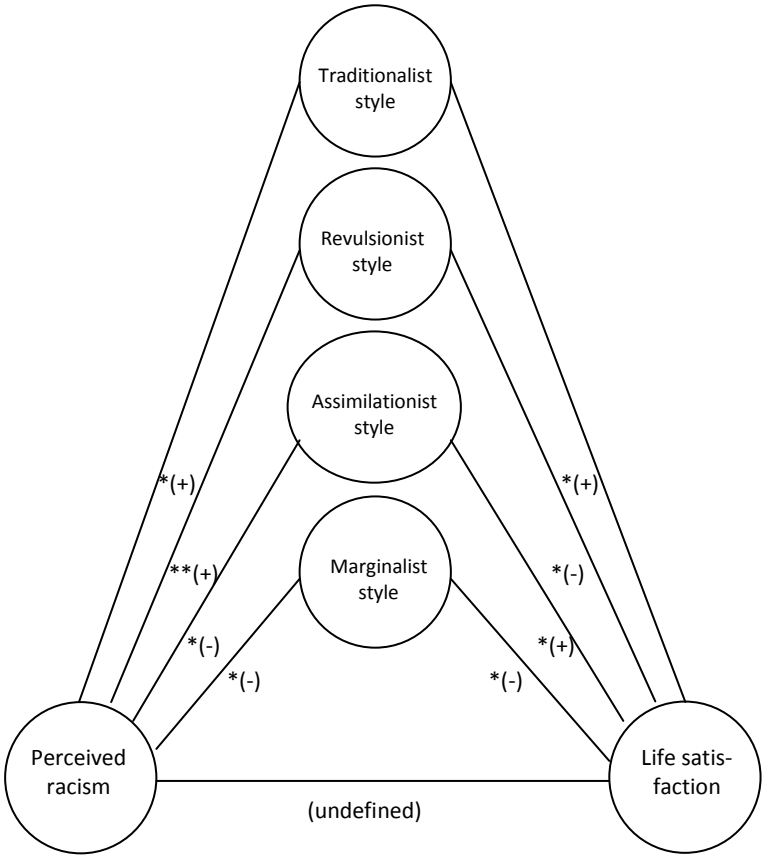


FIGURE 11: Nomological network representing the relationship of TRAM-styles with perceived racism and life satisfaction.

5.) *Is the RDQ free of cultural bias?*

The query whether the RDQ is a universal scale applicable in various cultural contexts, is approached through the following questions:

a.) *Are the samples similar with regard to the demographic characteristics?*

The demographic characteristics of both samples are compared in a contingency analysis. It is assumed that both samples are comparable with regard to the demographic characteristics. It was expected that the contingency coefficients Pearson's X^2, Cramer's *V* and *γ* indicate significant relationships of the two samples.

b.) *Do both studies show similarity regarding missing and invalid items?*

Correspondence in frequency of missing values is compared across the two studies.

c.) *Are the items' distribution patterns congruent?*

Corresponding items from the two validation studies are checked for apparent congruence or divergence on the determined item statistics.

d.) *Do facets exhibit similar peculiarities regarding inconsistency?*

The frequency of inconsistencies in the facets are compared for apparent similarities and differences in the two validation studies.

e.) *Do items perform comparabe regarding the characteristic values?*

Corresponding items from the two validation studies are checked for apparent congruence and divergence on the determined characteristic values.

f.) *Do mean scores vary across the Australian and Chilean sample?*

A t-test checks the statistical significance of score differences within the RDQ subscales of both studies.

g.) *Does the RDQ exhibit cross-cultural reliability?*

A separate analysis of F-values checks for significant differences of subscale reliabilities between the two validation studies. It is assumed that the RDQ subscales are comparable with regard to reliability in the two samples, that is:

→ *Hypothesis VI*: Differences of reliability coefficients in the two samples are not significant.

h.) *Does the RDQ exhibit cross-cultural validity?*

The factorial agreement of the Australian Aboriginal study and Chilean Mapuche study is assessed and expected to be high. Specifically, it is postulated that:

→ *Hypothesis VII*: The factor similarity coefficients in the samples amount to ≥ .95[66].

[66] Van de Vijver and Leung (1997) proposed that coefficients ≥ .95 indicate factorial similarity, whereas coefficients < .90 indicate incongruity.

GENERAL OUTLINE OF STUDY

The research project followed sequential stages of test development and test validation, illustrated in Figure 12. In a first step, the response facets proposed in the TRAM-model were operationalized. This stage referred to as scale construction, specifically involved the general conceptualization of the test, item generation, and the determination of the test design.

Four successive empirical studies were conducted, each followed by an extensive data analysis: The pretest and construction study both aimed to successively improve the original scale from the scale construction stage. Thus, the RDQ was presented to a sample of Australian Aboriginal people and the item set revised on the basis of the conclusions drawn from the data analysis. The Australian Aboriginal study and the Chilean Mapuche study examined the test's performance, one in a sample of Australian Aboriginal people and one the new context of Chilean Mapuche people. Both studies primarily aimed to determine the RDQ's psychometric properties, specifically reliability and validity. In a final stage, results from the two cultural contexts were statistically compared to provide a cross-cultural validation of the scale.

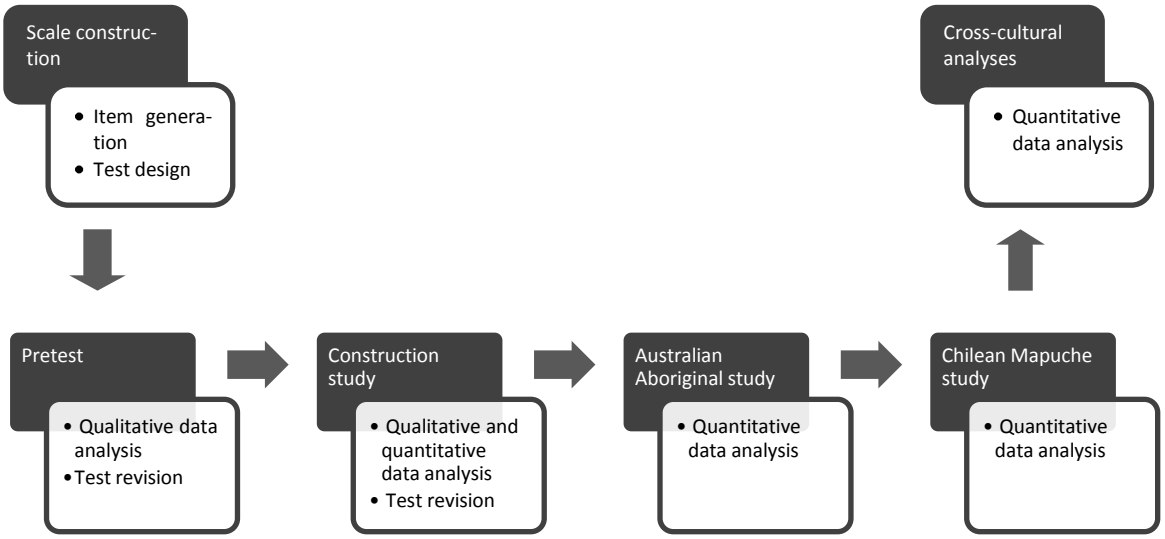


FIGURE 12: Stages and operations in the development and validation of the RDQ.

SCALE CONSTRUCTION

This chapter guides through the process of conceptualizing, operationalizing, and designing the RDQ. It, thus, provides a protocol about how and on what basis the RDQ was constructed.

1. Test conception

A rational test concept provided the basis for the test construction. The TRAM-model defined the conceptual width of the future instrument: The four response styles were aimed to be represented by four subscales – RDQ-T (representing the traditionalist style), RDQ-R (= revulsionist style), RDQ-A (= assimilationist style), and RDQ-M (= marginalist style). The 35 facets of TRAM were each operationalized by a set of items [chapter b), Introduction].

2. Item generation

The first item set was generated following the prescript that the conceptual width of each facet was to be reflected. Furthermore, Brislin's guidelines concerning the linguistic style of items (1986; Appendix A-2) were generally observed. The initial item set was then successively presented to three experts: First, a researcher with a background in cultural studies in the Aboriginal Australian context checked the items' content for cultural sensitivity and applicability. Then, a researcher with expertise in psychological diagnostics and test development reviewed the items for methodological adequacy. Third, an Australian researcher checked the items for correct orthography and grammar. After each inquiry, suggestions were considered, and the item set adapted.

The resulting initial item pool is presented in Appendix B-1. Each facet is represented by a minimum of two and a maximum of five items to reflect the complexity of the underlying concepts. Most facets contain negatively worded items. However, the categories racism awareness and group concept had been arranged along oppositional categories (e.g., racism consciousness vs. racism denial), and, as a consequence, no additional negative items were generated. The category alienation contains no negative items for the following reasons: First, because the concept alienation has not yet received major attention from researchers in the context of responses to discrimination, it presented an exploratory category to this investigation. Furthermore, such rather severe responses were not expected to be broadly affirmed by participants, but to present exceptional response patterns. Providing more of an initial screening it was decided not to include negative items in this category.

3. Answering format and test design

A five-point Likert scale provided the answering format. The answering categories allowed the participants to choose between one of the response alternatives *Wrong*, *Somewhat wrong*, *Not sure*, *Somewhat right*, and *Right* to each Likert item. It was discovered that the five categories reflected the answering behavior to these specific items more naturally, and were expected to provide an easier and more immediate understanding of what was expected from the participant than the original Likert format differentiating *Strongly disagree*, *Disagree*, *Not sure*, *Agree*, S*trongly agree*. Equidistance of the succeeding response categories was assumed.

The answering formats in the demographic section of the RDQ were determined according to the kind of information inquired: The categories age and years at school were presented as open answering formats. A multiple-choice format was applied with respect to gender (response alternatives: *Female*, *male*), marital status (response alternatives: *Married*, *separated*, *divorced*, *widowed*, *single*), employment status (response alternatives: *Employed*, *unemployed*, *homemaker*, *student*, *retired*), religious affiliation (response alternatives: *Traditional*, *Christian*, *other*, *none*), and English proficiency (response alternatives: *Mother tongue*, *second language*).

The questionnaire's layout followed the premise to provide clarity and ease readability for the participants, while concurrently being efficient for the researcher in terms of result analysis and resource expenses. Accordingly, the RDQ contains no redundant information, conceptually distinct sections are also visually distinguishable (e.g., instruction and demographic section on the first page, color nuances between successive items); type size and type face are uniform and correspond to the standards of manuscript design (i.e., American Psychological Association, 2001).

STUDY 1: PRETEST

In the pretest, the RDQ questionnaire was presented to a small sample of Australian Aboriginal people. The primary objective was to receive qualitative information about which items caused difficulty or discomfort to the participants. Major emphasis was laid on improving the linguistic style and comprehensibility of items. A second aim was to exclude items that significantly reduced the compliance to the test.

1. Method

1.1 Subjects

The pretest was conducted in October 2007 in an Aboriginal Rehabilitation Centre in Melbourne (Victoria), Australia. Eight Aboriginal men participated in this first application of the RDQ. Of these 8 men, five (62.5%) were able to respond autonomously. For the lack of literacy, the questionnaire was read out by one of the involved investigators in form of a full structured interview to three participants (37.5%). The participants were between 19 and 45 years of age (*M* = 30.63; *SD* = 7.93) and had received an average of 8.25 years formal school education (SD = 2.12; Min = 4, Max = 10). Respective the socioeconomic variables, five participants were singles (62.5%) and two divorced (25.0%). Seven participants (87.5%) reported to be unemployed. Four men followed Christian religious beliefs (50.0%), three reported to have no religious affiliation (37.5%), and one participant followed traditional religious beliefs (12.5%). To seven people, the English language was their mother tongue (87.5%), while one man reported that English was his second language (12.5%).

Given the limits of time, monetary expense, and situational context, the sampling strategy followed a convenience approach: Participants were recruited in the institution that gave consent for the conduction of the study. Consequently, the sample was not representative.

1.2 Material

The inquiry was based on the first version of the RDQ that consisted of 120 items and was designed as a five-point Likert rating scale (0 = *Wrong*; 1 = *Somewhat wrong*; 2 = *Not sure*; 3 = *Somewhat right*; 4 = *Right*). Additionally, the demographic section asked for personal data from seven categories [chapter c), Introduction] that were inquired in open and multiple-choice formats.

1.3 Procedure

Before filling in the RDQ (Appendix B-4), participants received a plain language statement (PLS; Appendix B-2) that informed about the aim and procedure of the study, and contained contact details of the researcher. A consent form (Appendix B-3) was handed out, on which participants gave their agreement to participate in the study.

Participants were instructed to carefully read the instructions and to provide only one answer per item. Having completed the questionnaire, participants were asked to fill in a Documentation sheet (Appendix B-5) that inquired, which items were hard to understand or too complicated, ambiguous in meaning, intimidating, and strange or not applicable to the context. Additionally, participants could give general comments about whether they thought the questionnaire was too long, appeared insidious, the questions were upsetting, the questions reflected well their opinion, and whether they encountered the questionnaire could be applied without problems. Further space was provided for free comments.

At the end of the study, participants were thanked, debriefed, and received an expense allowance of 20 $A (approx. 14€). The researchers autographically added information after the inquiry about the city, in which the inquiry took place, and the literacy of the participant.

1.4 Analysis

The statistical analysis was performed utilizing the statistical analysis program software Statistical Package for the Social Sciences (SPSS) for Windows, version 15.0. To describe the demographic structure of the sample, mean, standard deviation, minimum values, and maximum values for categorial variables, and absolute numbers and percentages for metric variables are reported.

A two-step qualitative data analysis was carried out in order to determine, which items needed to be excluded or modified. The analysis was based on reports from the documentation sheets and behavioral observations of the investigator. The strategy of test revision followed the directive to be unobtrusive with regard to the exclusion of items at this early stage, while concentrating on refining the linguistic style of items in order to obtain an instrument of coherent internal structure and high comprehensibility.

2. Results

2.1 Analysis of documentation sheets

Comments of participants from the documentation sheet were analyzed. The participants evaluated the questionnaire in the general comment section, which was open to multiple structured responses and free comments. Three participants (37.5%) reported the questionnaire was too long, twi participants (25.0%) commented that the questionnaire appeared to be insidious or to have a hidden intention, and three participants (37.5%) felt the questions were upsetting. Four participants (50%) thought that the questionnaire reflected well their opinion, and four participants (50%) confirmed that the questionnaire could be applied without problems. The results highlighted the need to reduce the absolute number of items, but also to re-formulate or exclude items that were complex or distressing.

Three participants (37.5%) completed the section for comments on difficulties with specific items. Another three participants (37.5%) gave rather general comments to the questionnaire and application process that were, consequently, considered as free comments. Two participants (25%) provided no information to this section. Participants reported 15 items to be too hard to understand or too complicated, eight items to appear ambiguous in meaning, two items to be intimidating, and three items to appear strange or not applicable to the context[67]. Of these 26 reported "troublesome" items, three (items 35, 36, and 94) were excluded from the questionnaire to enhance participants' compliance. Specifically, item 35 from the facet ethnic shame and item 94 from the facet ethnic disdain caused distress to some participants. Item 36 was excluded because it was not well comprehended. Excluding the three items caused no grave methodological inconvenience, as the affected facets still contained sufficient and conceptually diverse items.

Fourteen items were linguistically adapted in order to enhance comprehensibility and conceptual density. The affected items underwent three successive treatments: First, the grammatical structure was simplified; second, unnecessary words were deleted; and third, easier words replaced complicated words. The modifications improved readability according to the Flesch Reading Ease Score (Flesch, 1949) from 69.8 before the adaptation to 70.2 after adaptation[68]. A list of original and modified item formulations, and notes about which form of adaptation was applied is provided in Appendix B-7.

[67] Multiple answers were allowed.

[68] The Flesch Reading Ease Score ranges between zero to 100 with lower values indicating a harder text and higher values indicating an easier text.

No changes were applied to nine items reported in the documentation sheets. Observations during the process of data collection indicated that difficulties with these items were partly due to a lack of conceptual understanding in some participants. Specifically, the concepts racism (item 76) and dedication (item 22) were often not well comprehended. Items from the four facets within the response category alienation (items 8 and 86) were not well comprehended by some participants, which was previously expected. Finally, the question about feeling part of an Aboriginal community (item 120) was reported difficult, as it did not reflect the social reality for some participants. Because these items appeared to be "troublesome" for only some participants, they were accepted without linguistic modifications for the next stage.

Another result refers to the general observation that participants exhibited difficulties responding to negatively worded items. Because of their methodological significance they were retained and not modified.

Two items were reported difficult because they combined two behavioral categories (item 88: Staying away from drugs and alcohol; item 99: Playing computer games or going gambling). Participants commented, for example, that they stayed away from drugs but not from alcohol, or did not have the facilities to play computer games but went gambling on a regular basis. However, because the focus of the assessment was not to specify, which of these behaviors were apparent, but whether they were apparent at all, it was decided to retain the original formulations. Appendix B-6 illustrates the content and frequency of comments in the Documentation sheets.

2.2 General analysis

After analysis of the documentation sheets, the remaining unrevised 94 items were unpromptedly reexamined for comprehensive wording, a stringent grammatical structure, and apparent redundancy. Thirty-three items were accepted in their original formulations. A further three items were excluded from the instrument: It was observed that item 31 from the facet ethnic disdain and item 71 from the facet obstructionism caused discomfort in some participants, so they were excluded to reduce distress and to further improve the participants' compliance to the test. Item 69 from the facet injustice was excluded because it was observed to lack comprehensibility.

Fifty-eight items were linguistically modified. Analogous to the prior analysis of documentation sheets, the three successive steps of item adaptation involved, first, the simplification of the gramatical structure, second, the deletion of unnecessary words, and, third, the replacement of difficult words and expressions by easier words and expressions. The expressions "non-indigenous" and "European" as reference to the out- group generally caused trouble understanding, and were substi-

tuted by the unambiguous terms “white people” or “Whites“, respectively. After these modifications ,the Flesch Reading Ease Score (Flesch, 1949) improved from 70.2 to 75.9. Appendix B-8 provides an overview of the original and modified item formulations as well as notes about what kind of modification was applied.

Finally, the order of the remaining 114 items was changed. In the pretest version of the RDQ, items were arranged in a random order with the only rule applied that items representing identical facets would not directly follow one another. Having analyzed the pretest data, further regulations appeared adequate: 1) Three items of anticipated simple content, or of high popularity were positioned at the beginning and ending of the questionnaire; 2) blocks of negative items were avoided; and 3) blocks of items with a potentially distressing content were avoided. It was expected that these adaptations would increase the participants’ motivation to the test procedure at the start and termination of the inquiry.

Moreover, the demographic section was slightly modified: 1) The response category years at school was re-labeled to the conventional expression highest level of education; 2) two response alternatives, *de facto* and *other*, were added to the response category marital status; (3) the category employment status was extended by the response alternatives *pension* and *other*; and (4) in the category English proficiency the item *mother tongue* was re-labelled to *first language*. The revised questionnaire is provided in Appendix C-1. It was decided to open the item religious affiliation to multiple responses, because participants inquired about this option with some frequency.

3. Discussion

The qualitative information gathered in this first study helped to revise the questionnaire: Some items were complex and required linguistic adaptations. Others showed to be distressful or incomprehensible and were excluded to increase the compliance of participants to the test procedure. As a result, six items were excluded from the questionnaire, and 72 items were linguistically modified. On the basis of these initial analyses, a revised version of the RDQ was generated that could be applied in the subsequent construction study.

The pretest also informed about general difficulties that participants experienced in relation to the inquiry. It was observed that illiterate participants demonstrated a stronger tendency towards extreme responses (i.e., *Right*- or *Wrong*-answers). Some of the negatively worded items caused difficulties to participants because they practically contained a double negation. Consequently, these items altered the automatic response process, particularly in illiterate participants.

A limitation of the study relates to the demographic homogeneity of the sample: Only men of low socioeconomic status were inquired, which potentially lowered variability in the provided responses. However, this bias was not considered essential, as it did not affect the primary objectives of the pretest.

STUDY 2: CONSTRUCTION STUDY

In the construction study, the RDQ was presented to a large sample of Australian Aboriginal people in order to obtain a broad data base for the quantitative analyses. Results from the quantitative analyses provided information for the final item selection. The main goal at this stage was to reduce the total item number significantly and to retain only items in the RDQ that were conceptually and statistically the most sound.

1. Method

1.1 Subjects

Study 2 was conducted between October and November 2007 in the Australian federal state of Victoria (VIC) and the Northern Territory (NT). Study 2 and study 3 were mainly contributed to by Koori people (South-East Australia), Tiwi island people (off Arnhemland, North Australia), Yolngu people (Arnhemland, North and Central-North Australia), Arrunta people, and Pitjatjantjarra people (both Central Australia).

The sample consisted of the staff members from partner institutions (Aboriginal Legal Aid Services, Aboriginal Land Councils) and Aboriginal people, who were recruited in central places (Aboriginal hostels, casinos, shopping centres, welfare housing areas).

A total of 101 Aboriginal people responded to the second, revised version of the RDQ, of which 46 were female (45.54%) and 55 were male participants (54.46%). Sixty-four participants (63.37%) were literate and able to respond to the questionnaire autonomously; 37 illiterate participants (36.63%) received a full-structured interview by one of two involved researchers. Respondents were between 18 and 68 years of age (M = 37.92; SD = 11.69). A summary of all inquired demographic characteristics can be derived from Table 4**.** The sample was non-representative.

TABLE 4: Demographic characteristics of sample in study 2.[a]

Variable	Specification	*N* (%)	*M, SD, Min, Max*
City / town	Melbourne (VIC)	10 (9.9)	
	Darwin (NT)	65 (64.4)	
	Palmerston (NT)	7 (6.9)	
	Katherine (NT)	12 (11.9)	
	Alice Springs (NT)	7 (6.9)	
Sex	Male	55 (54.5)	
	Female	46 (45.5)	
Age (years)			*M* = 37.92, *SD* = 11.69, *Min* = 18, *Max* = 68
Literacy	Literate	64 (63.4)	
	Illiterate	37 (36.6)	
Highest level of education (years)			*M* = 9.64, *SD* = 3.01, *Min* = 0, *Max* = 15
Marital status	Single	41 (40.6)	
	De facto	24 (23.8)	
	Married	29 (28.7)	
	Separated	2 (2.0)	
	Divorced	2 (2.0)	
	Widowed	2 (2.0)	
	Other	1 (1.0)	
Employment status	Employed	40 (39.6)	
	Unemployed	22 (21.8)	
	Pension	23 (22.8)	
	Homemaker	2 (2.0)	
	Student	7 (6.9)	
	Retired	2 (2.0)	
	Other	3 (3.0)	
Religious affiliation	Traditional	35 (34.7)	
	Christian	30 (29.7)	
	Other	7 (6.9)	
	None	17 (16.8)	
	Traditional + Christian	8 (7.9)	
English proficiency	First language	56 (55.5)	
	Second language	42 (41.6)	

Note. [a]Total numbers (*N)*, percentages (%), means (*M)*, standard deviations (*SD*), minimum (*Min*), and maximum values (*Max*) presented.

1.2 Material

The inquiry was based on the second, revised version of the RDQ. The questionnaire now contained 114 items organized within 35 facets. The answering format was identical to the pretest. The

demographic section consisted of seven items of open and multiple choice formats that had been partly adapted after the pretest. The changes applied are documented in chapter 2.2 (study 1).

1.3 Procedure

Participants received a PLS (Appendix B-2), then signed a consent form (Appendix B-3), and finally completed the revised RDQ (Appendix C-1). They were asked to read the instructions and to provide only one answer per item with the exception of the demographic category religious affiliation.

Having completed the questionnaire, the participants were thanked, debriefed, and given a monetary compensation of 10A$ (approx. 7€). The researchers autographically inserted information on the RDQ's front page about the literacy of the participant and the city or townships, where the inquiry took place.

1.4 Analysis

Data were analyzed using the statistical software SPSS 15.0 for Windows. An analysis of missing and invalid values was undertaken to examine whether missing and invalid data resulted from difficulties understanding the item or from the lack of compliance in some participants. Univariate and bivariate item analyses as well as a histogram analysis provided information about item characteristics and the distribution pattern**.** Based on the statistical parameters and on general conceptual considerations, items that were accepted in the final item set of the RDQ were determined, and finally checked for linguistic adequacy.

2. Results

2.1 Missing and invalid values analysis

Data were analyzed for missing and invalid values. As a rule, values were coded as missing if the item was not responded to. Invalid values were coded if the response did not comply with the re-

sponse format (e.g., if the participant gave multiple answers within the forced-choice answering format, the item was not answered within the given field, or the participant commented on the statement rather than responding within the answering categories). Only items and cases are reported that caused more than 5% missing and invalid values in the total sample.

None of the categories in the demographic section caused more than 5% missing and invalid values. The case-wise analysis, however, revealed that 1 participant did not respond to three categories in the demographic section, which caused a total of 37.5% missing values. Another 12 participants caused one missing or invalid value (12.5%).

In the item section, seven items were missing or invalid in over 5% of the cases. Concerning the case-wise analysis, 3 participants produced particularly high rates of missing and invalid values: It appeared that these high rates of false data were caused by missing out on pages in two participants and a lack of compliance in one participant. Moderate rates of missing or invalid data were reported from eight participants. A detailed overview of missing and invalid data is provided in Table 5.

TABLE 5: Missing and invalid data from item-wise (upper rows) and case-wise analysis (lower rows) in study 2.[a]

Section	Item	Missing (*N*)	Missing (%)	Invalid (*N*)	Invalid (%)	Total (*N*)	Total (%)
RDQ- Item	4	5	5.0	-	-	5	5.0
	5	5	5.0	-	-	5	5.0
	27	6	6.0	1	1.0	7	7.0
	35	3	3.0	2	2.0	5	5.0
	36	2	2.0	3	3.0	5	5.0
	37	5	5.0	-	-	5	5.0
	40	2	2.0	3	3.0	5	5.0
Section	Case	Missing (*N*)	Missing (%)	Invalid (*N*)	Invalid (%)	Total (*N*)	Total (%)
RDQ-	9	1	12.5	-	-	1	12.5
Demographic	14	-	-	1	12.5	1	12.5
	18	3	37.5	-	-	3	37.5
	25	-	-	1	12.5	1	12.5
	27	-	-	1	12.5	1	12.5
	28	1	12.5	-	-	1	12.5
	29	1	12.5	-	-	1	12.5
	52	-	-	1	12.5	1	12.5
	55	1	12.5	-	-	1	12.5
	65	1	12.5	-	-	1	12.5
	67	-	-	1	12.5	1	12.5
	89	1	12.5	-	-	1	12.5
RDQ-Item	14	1	0.88	9	7.9	10	8.8
	15	48	42.1	2	1.8	50	43.9
	18	18	15.8	12	10.5	30	26.3
	28	28	24.6	-	-	28	24.6
	42	6	5.3	2	1.8	8	7.0
	46	7	6.1	-	-	7	6.1
	51	6	5.3	-	-	6	5.3
	53	5	4.4	2	1.8	7	6.1
	55	1	0.9	7	6.1	8	7.0
	62	5	4.4	2	1.8	7	6.1
	80	8	7.0	-	-	8	7.0

Note. [a]Only cases causing ≥ 5% missing/ invalid values reported. Numbers (*N*) and percentages (%) are presented.

2.2 Item statistics and selection

The process of item selection involved three sequential steps: 1) Data screening, 2) diagnosis, and 3) editing (Figure 13). During data screening, the mean, median, standard deviation, skewness, kurtosis, item popularity, and discriminatory power were determined. Appendix C-3 gives a detailed account of the item statistics.

Hypothetically, any facet is characteristic of one of the four response styles. Consequently that facet is less typical for the contrary response styles and incongruous to the contradictory response

style. Each way, responses in the middle category (i.e., *Not sure*) were preferred to occur only on exceptional occasions, because the middle category may as well present methodological artefacts, for example a lack of comprehension, suspiciousness, or a lack of compliance. Consequently, bimodal distributions are hypothesized to most accurately reflect the proposed structure of the TRAM-model.

However, due to potential particularities of the sample and to methodological artefacts, items may present bias, specifically ground or ceiling effects. According to Fisseni (1997, S. 124), ground effects are diagnosed if standardized means score < 0.2, and ceiling effects if standardized means score > 0.8[69]. Alternative formulations for distributions that tend to one extreme are low popularity (or tendency towards rejection, or left skew, i.e., items tending towards 0) and high popularity (or tendency towards affirmation, or right skew, i.e., items tending towards 1). Furthermore, irregular distributions may be present in items that demonstrate comparably frequent responses within the middle category.

The major aim at this stage of the investigation was to reduce the item pool significantly; each facet was constrained to two items. Decisions about item selection were met with regard to the results that were obtained from the statistical analyses and from conceptual considerations. As previously explained, items exhibiting approximately u-shaped response distributions were favored. Furthermore, facets were composed of items that maximized homogeneity within their respective facet. The items' statistical performance and brevity of the total scale had the priority over the conceptual width of the facets. Items should also maintain the motivation of participants to complete the questionnaire, and they should be comprehensible. Finally, considerations about the item's representativeness for its respective facet were taken into account in order to come to a decision about the item's treatment.

In the course of item selection, the following cases occurred: (1) The item was retained unchanged, (2) the item was excluded, and (3) the item was modified. Decisions were also met with respect to the facets. Depending on the statistical parameters of the item set within each facet, it was decided that (4) the facet was retained, (5) the facet was excluded, (6) the facet was modified, and (7) a new facet was introduced.

[69] Standardized mean scores range between 0 and 1. A definition of the popularity index is provided in chapter 2.1.5 (study 3).

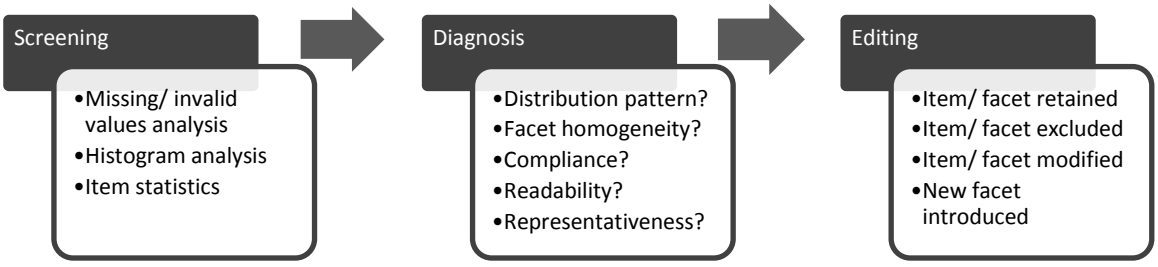


FIGURE 13: The process of item selection.

A general revision was applied to all items that contained the expression "indigenous". Because this expression provoked controversy in many participants during data collection, it was decided to replace this term by the term "Aboriginal". This type of modification is not further commented in the subsequent paragraphs. The original and modified item versions as well as notes about what kind of modifications were applied is provided in Appendix C-2[70]. The following paragraphs summarize central item parameters, provide the rationale for the item selection, and comment on the applied linguistic modifications.

Facet 1 (racism consciousness) showed ceiling effects in all items. The discriminatory power was low for all items, but lowest in item 14.

As a consequence, item 14 was excluded. While this item performed comparably better with regard to most measures of central tendency, items 80 and 98 improved homogeneity within the facet. However, item 14 was not excluded from the item pool, but integrated into facet 14 (i.e., injustice), to which it fit in conceptually well and its statistical indices were favorable.

Facet 2 (racism ignorance), oppositely, exhibited low means and positive skewness indices. The discriminatory power was satisfying for all items.

Performing comparable with regard to the item statistics, item 4 was deleted from the facet, because it exhibited a large number of missing and invalid values.

Facet 3 (racism vigilance) showed approximately u-shaped distributions, and, consequently, high standard deviations. All items exhibited good discriminating power.

Items 25 and 36 were excluded. Item 36 produced comparably high numbers of missing or invalid values. Item 25 contained a rather extreme formulation, which potentially caused frequent *Not-sure*-responses. Because the category was aimed to measure a moderate awareness of personal discrimination, the rather extreme awareness represented by this item fit less well into the facet.

Facet 4 (racism denial) was characterized by items exhibiting rather low popularity, and, as a result, a positive skew. The discriminatory power was good in all items.

[70] The item arrangement for each facet in the four successive studies is provided in Appendix B-9.

Item 41 was excluded for its comparably less favorable statistical parameters. Its rather extreme formulation was not as apt to conceptually represent the facet compared to the other items in the item set.

Facet 5 (pro ingroup) exhibited pronounced ceiling effects in all items except item 103. The discriminatory power was acceptable for item 1 and item 6. Item 103 showed the opposite tendencies: Measures of central tendency were moderate, but the discriminatory power was low.

Items 59 and 103 were excluded, because they lowered homogeneity within the facet. A minor linguistic modification was applied in the retained items 1 and 6: The expression “my indigenous” was substituted by the phrase “the Aboriginal.” It accounts for the fact that only a minority of the Aboriginal people practically live in Aboriginal communities. The new formulation refers to a more general perception of relatedness to other Aboriginal people.

Facet 6 (anti ingroup) was characterized by a pronounced ground effect in item 48, and a tendency towards rejection in items 21, 29, and 85. The discriminatory power was acceptable for all items, but highest in items 21 and 29.

Item 85 was excluded because of its comparably lower discriminatory power. Furthermore, item 48 was excluded because of the ground effect it produced. A linguistic modification was applied to item 29: The phrase “The traditional indigenous” was replaced by the term “Aboriginal” for simplification purposes.

Facet 7 (pro outgroup) produced high variances in all items. However, item 90 led to more disagreeing responses, while items 10, 45, and 108 demonstrated a tendency towards affirmation. Item 90 showed a low discriminatory power, while items 10, 45, and 108 performed well on that parameter.

Items 45 and 90 were excluded. Item 90 was excluded because of its low discriminatory power. Item 45 performed equally well as item 10 statistically. However, its strong linguistic resemblance to item 108 potentially reduced the compliance of participants due to repetitiveness, so it was excluded from the item set.

Facet 8 (anti outgroup) is characterized by items that prompted extreme responses. Items 16 and 93 showed good discriminatory power, while item 56 performed less favorable on this parameter.

Although measures of central tendency were comparable to those of other items, item 56 was excluded because of its low power that reduced the homogeneity within the facet.

Facet 9 (cultural estrangement) prompted extreme responses. Items 5 and 77 showed a comparably better discriminatory power than item 96.

Item 77 was excluded because it produced undesirable responses in the middle category. Furthermore, item 96 was regarded as conceptually more representative to the facet.

Facet 10 (social isolation) was characterized by items that showed high variances. Items 74 and 100 scored highest on the discriminatory power index.

Item 31 showed lower power than other items of this facet. Furthermore, it appeared more important from a conceptual point of view to retain items with a reference to the social character of isolation rather than the psychological feeling of loneliness. Therefore, item 31 was excluded.

Facet 11 (anomy) resulted in items exhibiting high variances; the histogram analysis revealed a high frequency of responses in the middle category resulting in w- shaped distributions in both items. The discriminatory power was acceptable. Items of facet 11 were accepted unchanged.

Facet 12 (depersonalisation) was characterized by a low popularity in both items. Variances were acceptable and the discriminatory power was high. Items of facet 12 were accepted unchanged.

Facet 13 (permanent damage) showed approximately u-shaped distributions in items 82 and 111, while negative item 112 exhibited a rejection bias. Discriminatory power was acceptable for all items.

No item was excluded from facet 13, because they were regarded as conceptually essential. Item 112 was linguistically adapted: The expression “White settlement did not do much damage to indigenous cultures” was replaced by “White people did not affect Aboriginal cultures.” The changes appeared necessary in order to simplify structure, and – by replacing the term “damage” with “affect” – to increase comprehensibility. Facet 13 was the only exception from the rule that only two items were retained in each facet in the RDQ after the selection process.

Facet 14 (injustice) resulted in an affirmation bias in all positive items and a ceiling effect in item 33. The negative item was frequently rejected. However, all items demonstrated a satisfying variance. The discriminatory power was moderate in items 33, 69, 106, and low in item 8.

Facet 14 was re-arranged. During analysis it became clear that item 14, which was originally assigned to facet 1, was conceptually related to facet 14. A separate analysis revealed that the item showed more favorable statistical parameters than even the original positive items. The re-arranged facet now consisted of the original negative item and the introduced positive item 14.

Facet 15 (system justification) resulted in u-shaped distributions in all items. The discriminatory power was good with respect to the positive items, but low in the negative item.

Item 27 was excluded from the facet because it showed the least favorable item statistics, exhibited a comparably large number of missing or invalid values, and was the conceptually least representative to the facet. Item 95 was excluded because it reduced homogeneity within the facet. Item 19 was not well comprehended and, therefore, excluded. The retained items 11 and 95 underwent linguistic adaptations: In item 95 the term “chances” was substituted by the term “opportunities.” In order to enhance homogeneity within the facet, item 11 received a major modification from

the statement “Indigenous people do not have the same chances as other Australians” to “White people have better opportunities than Aboriginal people.”

Facet 16 (worthlessness) produced strong ground effects in the positive items and a ceiling effect in the negative item. This tendency was most pronounced in items 43 and 114, while items 17 and 34 showed acceptable variances. The discriminatory power was satisfying in the positive items, but low in the negative item.

Items 34 and 43 were excluded. Item 17 was retained because of its better performance on the power index, and because it produced a more interesting distribution pattern than items 34 and 43. However, it was slightly modified by excluding the word “old.” Major changes were applied to negative item 114: The statement “Indigenous traditions are valuable” was replaced by “Aboriginal cultures are worth to be kept alive” to assure a closer proximity to the concept worthlessness.

Facet 17 (control) resulted in unfavorable distribution patterns: Item 57 showed a pronounced ground effect, while items 83 and 105 produced w-shaped distributions. Discriminatory power was low in items 83 and 105, and negative in item 57.

Facet 17 was excluded from the questionnaire. All items demonstrated unfavorable statistical indices beyond the possibility to adaptation. It had also become evident during the process of data collection that the items were not well comprehended.

Facet 18 (hostility against ingroup) showed low popularity in the positive items, while the negative item exhibited high popularity. The discriminatory power was low, especially in the negative item.

Because of the low response variability, significant modifications were applied. Items were reformulated, so they presented an adapted linguistic equivalent to facet 19. The tendency to argue (item 22, facet 19) was considered to be a behavioral indication of outgroup hostility. The new item in facet 18 was worded “I tend to argue with Aboriginal people.” With regard to the negative item, changes were less pronounced: The statement “I am friendly towards other indigenous people” was replaced by “I am kind to Aboriginal people”, because the term “kind” implies a wider range of proactive behavior than just being “friendly.” It was, therefore, considered a more adequate antagonism to hostility.

Facet 19 (hostility against outgroup) produced high variances in the positive items. The negative item showed a high popularity. The discriminatory power was acceptable.

Facet 19 was adapted according to facet 18: Item 22 was left unchanged. Item 75 was modified from the statement “I am friendly towards white people” to “I am kind to white people.”

Facet 20 (withdrawal from ingroup) resulted in pronounced ground effects in both positive items and a ceiling effect in the negative item. Comparing the two positive items, distribution indices

were more in favor of item 79 than of item 94. The discriminatory power was satisfying in the positive items, but low in the negative item.

Facet 21 (withdrawal from outgroup) produced item responses of high variability: While item 61 exhibited a rejection bias, item 70 resulted in an approximately u-shaped distribution. The negative item exhibited an irregular distribution due to a high frequency of responses to the middle category. The power was low with respect to the negative item and acceptable in the positive items.

Items assigned to facets 20 and 21 were re-formulated so they presented adapted linguistic equivalents. Item 70 exhibited the most favorable item statistics in facet 21 and was left unchanged. This item was then adapted to fit facet 20 and was worded “I try to avoid contact with Aboriginal people whenever I can.” This new item was expected to increase response variability. The negative items required profound changes to increase performance: It was expected that a formulation that represented actual behavior rather than a behavioral preference met this objective. As a result, the statements “I mingle with Aboriginal people every day” (facet 20) and “I mingle with white people every day” (facet 21) was formulated.

Facet 23 (integration within outgroup) resulted in an affirmation bias in the positive items 18 and 35, while negative item 89 was mostly rejected. Nevertheless, items exhibited acceptable variances. Discriminatory power was satisfying in all items, but most favorable of item 18.

The facet was reduced to items 18 and 89. Item 35 was excluded because it was difficult to understand for some participants, while item 18 was generally regarded as straight forward. This observation was supported by the fact, that item 35 showed comparably more missing or invalid values.

Following the examples of facets 18/19 and facets 20/21, the new facet 22 (integration within ingroup) was conceptualized as the equivalent category to facet 23. The new items were worded “I get along well with Aboriginal people” and “I do not get along with Aboriginal people.”

Facet 24 (self-development) was characterised by ceiling effects in the positive items 9 and 76, and a ground effect in the negative item 44. The discriminatory power was low in all items.

Facet 24 clearly created strong tendencies to social desirable responses. To increase response variability, items were re-formulated. The new items contained the rather objective criterion of daily workload, respectively “I work more than 8 hours a day” (positive item) and “I work less than 8 hours a day” (negative item).

Facet 25 (destructive escapism) resulted in a rejection bias in positive items 20 and 30, while negative item 84 showed a tendency toward affirmation. All items demonstrated satisfying variances. The discriminatory power was acceptable in all items, but most favorable of item 30.

Item 20 was deleted to increase homogeneity within the facet. The somewhat derogative item 84 was linguistically adapted from “I stay away from” to “I do not consume .”

Facet 26 (retreat) exhibited an affirmation bias in the positive items 7 and 107, while the negative item showed a tendency toward rejection. However, acceptable variances and good discriminatory power indices were achieved in all items.

Item 107 was excluded. Performing about equally well with respect to the item parameters, item 7 was favored to item 109 because it was better comprehended.

Facet 27 (self-sacrification) produced ceiling effects in the positive items 15, 42, and 109. Negative item 52 prompted extreme answers in both directions. The discriminatory power was moderate in the positive items, but low in item 52.

Items from facet 27 were biased beyond the possibility of adaptation and the facet was consequently excluded from the questionnaire.

Facet 28 (social activism) demonstrated a high popularity in the positive items 2 and 60. Negative item 28 resulted in an approximately u-shaped distribution. The discriminatory power was low in all three items.

Items were reformulated in order to achieve a more homogeneous facet. Similar to facet 24, a formulation was required that presented an objective criterion of social activism. It was assumed that the statement “I am a member of an Aboriginal rights organization” fulfilled this requirement. The formulation of the negative item “I am not a member of any Aboriginal rights organization”, as direct negation of the positive item, was expected to ensure homogeneity within the facet.

Facet 29 (conformism) resulted in a pronounced ceiling effect with regard to positive item 73, while positive item 58 and negative item 37 showed u-shaped distributions. The three items exhibited a low discriminatory power.

It appeared that a more comprehensible criterion of conformism was required to ensure response variability and homogeneity within the facet. The new items “When I hear the Australian national anthem I sing or hum along” (positive item) and “I never sing or hum along to the Australian national anthem” (negative item) were expected to meet these objectives.

Facet 30 (obstructionism) produced positive items with a tendency towards rejection, but of acceptable variance. The negative item showed a pronounced affirmation bias. The discriminatory power was low in the negative item, but moderate in the positive items.

Because it had been apparent during data collection in both studies that the items significantly reduced the compliance in participants, it was decided to exclude the facet from the questionnaire.

Facet 31 (strengthening ingroup) produced ceiling effects in the positive items 47 and 99, and a ground effect in negative item 40. The discriminatory power was low in item 99, but moderate in items 40 and 47.

The unfavorable parameters urged the re-formulation of items. The new item “I take important responsibilities in the Aboriginal community” was expected to primarily apply to decision makers and

active community members, while other group members should reject this item. It was, therefore, expected to increase response variability and reduce social desirability. Negative item 40 exhibited comparably many missing and invalid values, which possibly implied conceptual ambiguity or other difficulties in comprehension. With the unmistakable criterion and simple statement "I have no contact with Aboriginal communities" this problem was sought to be avoided.

Facet 32 (resignation) created ground effects in positive items 12 and 81, and a ceiling effect in negative item 62. Nevertheless, variances and discriminatory power, though low in the negative item, were acceptable in the positive items.

Item 81 was excluded. While this item performed equally well on statistical measures as the competing positive item 12, the latter was formulated more clearly. Nevertheless, minor linguistic modifications were required: In item 12, the term "younger" was substituted by "young" for the purpose of simplification and reduction of ambiguity. With regard to negative item 62, the term "important" was replaced by "useful" to increase response variability and the phrase "the next generation" was replaced by "young Aboriginals" to increase homogeneity and comprehensibility within the facet.

Facet 33 (ethnic pride) showed pronounced ceiling effects and low variances in the positive items 23, 53, and 71. Negative item 102 was characterized by a ground effect, but also a higher variance than the positive items. The discriminatory power was moderate in the positive items, but low in the negative item.

Despite strong biases, that were expected to continue throughout the investigation, facet 33 was retained in the questionnaire, because of its conceptual significance. Linguistic adaptations concerned item 53, in which the statement "I feel proud about being an indigenous Australian" was substituted by "I am proud to be Aboriginal", and item 102, where the formulation "I do not feel proud about being indigenous" was replaced by "I am not proud to be Aboriginal" for simplification purposes. Items 23 and 71 were excluded.

Facet 34 (ethnic shame) produced a ground effect in positive item 32 and a ceiling effect in negative item 113. However, all items showed acceptable variances. The discriminatory power was low in the positive items and negative in item 113.

Facet 34 was excluded from the questionnaire because of the unfavorable item parameters and the reduction of compliance they caused, a tendency that had been apparent during the pretest and was confirmed in study 2.

Facet 35 (ethnic mistrust) resulted in items exhibiting approximately u-shaped distributions. The discriminatory power was good in the positive items, but negative in the negative item.

Items 26 and 67 were excluded. Item 51 was retained because of its good readability. Negative item 68 was modified: The new formulation “I trust white people” was intended to ensure homogeneity within the facet.

Facet 36 (ethnic disdain) produced unpopular positive items and a negative item of high popularity. The discriminatory power ranged between low and moderate.

Facet 36 was excluded from the RDQ, because items in this facet significantly reduced the compliance of participants to complete the questionnaire. Analogous to facet 34, the tendency was continuous in the pretest and study 2, so this decision appeared adequate.

At completion of the item selection procedure, the item order was re-arranged. The strategy applied after the first revision was employed. It involved that 1) three items of anticipated simple content or of high popularity were positioned at the beginning and ending of the questionnaire, 2) blocks of negative items were avoided, and 3) blocks of items with a potentially distressing content were avoided.

In a last step, the demographic section was revised: 1) The response category gender was re-labeled to sex, because it presents the anthropologically correct expression and was well understood; 2) the response category highest level of education was reversed to years at school as in the pretest, because it appeared more conventional to the participants; 3) the category English proficiency was re-labeled spoken language(s) and response alternatives were completely revised to *English only*, *English better than Aboriginal language*, *English and Aboriginal language equally*, and *Aboriginal language better than English* to provide a refined assessment of language ability; (4) the new category living area was introduced providing the alternatives (*Aboriginal reserve*), (*Rural area, Aboriginal community*), (*Urban area, Aboriginal community*), (*Rural area, away from Aboriginal community*), and (*Urban area, away from Aboriginal community*). The revised final version of the RDQ is provided in Appendix D-1.

3. Discussion

Several analytical steps led to the result that 53 items were excluded and 28 items were modified. The revision of the RDQ also involved that four facets were excluded, ten facets underwent major re-arrangement, and one facet was newly introduced.

Essential observations were made with regard to negative items. Initially, two approaches were taken in the process of scale construction: Negative items constituted either conceptual antonyms to the positive items (e.g., facet 18), or were formulated as direct negations to the positive item (e.g., facet 24). Both approaches demonstrated particular strengths and weaknesses: The antonym-

approach generally adversely affected the statistical performance, especially the facet's homogeneity, but maintained the participants' motivation during the test procedure. The negation-method enhanced the statistical performance, like the facet's homogeneity, but negatively affected compliance. Specifically, participants tended to get bored or felt the instrument was insidious if similar sounding items were repeatedly presented. The negation-method also required a complex processing of the provided linguistic information, because item and response presented a double negation.

It is acknowledged that the non-representative sample presents a potential methodological limitation of this study. However, the primary objective – providing a revised psychometric measure for the upcoming studies – was not considered to have been affected by it.

STUDY 3: AUSTRALIAN ABORIGINAL STUDY

Study 3 involved data collection with the shortened RDQ in a large sample of Australian Aboriginal people. In this study, it was aimed to assess the instrument's psychometric qualities: On item level, the parameters popularity, homogeneity, and discriminatory power are provided. On scale and subscale level, reliability and validity were determined to allow an evaluation of the formal-statistical exactness of measurement and theoretical accuracy, to which the RDQ measures the underlying concepts. Based on that information, the ability of the RDQ to assess the four response styles proposed by TRAM can be evaluated.

1. Method

1.1 Subjects

Study 3 was realized between March and May 2008 in the Australian federal state of Victoria and the Northern Territory. The participants were recruited from the staff of partner institutions (Aboriginal Legal Aid Services, Aboriginal Land Councils, Aboriginal Hostels, Aboriginal Language Centres), or were clients of special institutions (Aboriginal rehabilitation centres, Aboriginal hostels, tertiary education centres, hospitals).

The questionnaire was completed by a total of 127 Aboriginal people, of which 45 were men (35.4%) and 82 were women (64.6%). Ninety-one participants (71.7%) were literate and responded to the RDQ autonomously. Thirty-six illiterate participants (28.3%) received a full-structured interview by one of the involved researchers. Age ranged between 18 and 70 years (M = 39.43; SD = 11.98). The demographic characteristics are depicted in Table 6. The sample was non-representative.

TABLE 6: Demographic characteristics of sample in study 3.[a]

Variable	Specification	*N* (%)	*M, SD, Min, Max*
City / town	Melbourne (VIC)	31 (24.4)	
	Darwin (NT)	76 (59.8)	
	Katherine (NT)	14 (11.0)	
	Alice Springs (NT)	6 (4.7)	
Sex	Male	45 (35.4)	
	Female	82 (64.6)	
Age (years)			M = 39.43, SD = 11.98, Min = 18, Max = 70
Literacy	Literate	91 (71.7)	
	Illiterate	36 (28.3)	
Years at school			M = 9.66, SD = 2.92, Min = 1, Max = 20
Marital status	Single	52 (40.9)	
	De facto	28 (22.0)	
	Married	27 (21.3)	
	Separated	5 (3.9)	
	Divorced	4 (3.1)	
	Widowed	6 (4.7)	
	Other	4 (3.1)	
Employment status	Employed	49 (38.6)	
	Unemployed	23 (18.1)	
	Pension	29 (22.8)	
	Homemaker	2 (1.6)	
	Student	10 (7.9)	
	Retired	3 (2.4)	
	Other	5 (3.9)	
Religious affiliation	Traditional	37 (29.1)	
	Christian	31 (24.4)	
	Other	12 (9.4)	
	None	30 (23.6)	
	Traditional + Christian	11 (8.7)	
Spoken language(s)	English only	48 (37.8)	
	English better than Aboriginal language	12 (9.4)	
	English and Aboriginal language equally	46 (36.2)	
	Aboriginal language better than English	17 (13.4)	
Living area	Aboriginal reserve	8 (6.3)	
	Rural area, Aboriginal community	27 (21.3)	
	Urban area, Aboriginal community	39 (30.7)	
	Rural area, away from Aboriginal community	11 (8.7)	
	Urban area, away from Aboriginal community	39 (30.7)	

Note. [a]Total numbers (*N*), percentages (%), means (*M*), standard deviations (*SD*), minimum (*Min*), and maximum values (*Max*) are presented.

1.2 Material

The inquiry involved the application of three psychometric instruments: The shortened RDQ, the scale *Racism Experiences - Domains* (*EXP-DM*; Harrell, 1997), and the *Satisfaction with Life Scale* (*SWLS*; Diener et al., 1985).

The third and finally revised version of the RDQ included 63 items representing 31 response facets. The answering format was identical to the previous studies. The demographic section consisted of eight items of open and multiple choice formats that had been slightly modified after study 2 (chapter 2.2, study 2). The RDQ had a readability of 77.5 according to the Flesch Reading Ease Score (Flesch, 1949).

To determine sum scores, negative RDQ items were recoded beforehand and score values were assigned to the five response categories (*Wrong* = 0, *Somewhat wrong* = 1, *Not sure* = 2, Somewhat *right* = 3, and *Right* = 4). Scores of items assigned to the same subscale were added up. As a result, every participant received four sum scores representing the accordance with each of the four RDQ subscales. As they depended on the total item number present in the subscale, sum scores potentially ranged between zero and 68 for the RDQ subscale *traditionalist style* (*RDQ-T*), zero and 48 for the RDQ subscale *revulsionist style* (*RDQ-R*), zero and 56 for the RDQ subscale *assimilationist style* (*RDQ-A*), and zero and 80 for the RDQ subscale *marginalist style* (*RDQ-M*).

The EXP-DM (Harrell, 1997; Appendix D-2) is one of the scales from the complete *Racism and Life Experience Scales* (RaLES) that was developed to measure "multiple dimensions of racism-related stress and associated constructs" (Harrell, 1997). The RaLES are based on a model of racism-related stress and well-being (Harrell, 2000) that is presented in chapter 2.1.1 (Introduction). Operationalizing the construct *perceived racism* (chapter 5, Introduction), the EXP-DM specifically assesses experiences of racism across 10 public domains (e.g., school, employment, housing). The scale was selected among other scales measuring perceived racism for its brevity, ease of administration, and good psychometric properties.

The scale requires participants to report the severity, with which they experienced racism in the various domains on a five-point rating scale (*Not at all* = 0, *A little* = 1, *Somewhat* = 2, *A lot* = 3, *Extremely* = 4). Consequently, sum scores potentially range from zero (i.e., no experiences of racism in the 10 domains) to 40 (i.e., extreme experiences of racism in all 10 domains). In the referred study, the reported reliabilities of EXP-DM were .82 (Cronbach-α) and .74 (split-half), respectively. Construct validity of the EXP-DM was assessed through application of additional psychometric scales. EXP-DM showed a moderate negative correlation of -.19 ($p < .05$) with the Marlowe-Crowne Social Desirability Scale (Crowne & Marlowe, 1960). High positive correlations were reported for the Urban Life Stress Scale (Harrell, 1994; $r = .50$; $p < .001$).

The SWLS (Diener et al., 1985; Appendix D-2) is a five-item measure assessing global life satisfaction, a sub-category of subjective well-being (chapter 2.1.1, Introduction). The scale provided the means to assess the construct life satisfaction as part of the proposed nomological network (chapter 5.3, Introduction) as conceptual basis for the validity assessment of the RDQ. The SWLS is a widely excepted scale in psychological research that has repeatedly demonstrated its psychometric qualities and is easily administered.

The answering format corresponds to a standard Likert scale ranging from 1 to 7 (*Strongly disagree* = 1, *Disagree* = 2, *Slightly disagree* = 3, *Neither agree nor disagree* = 4, *Slightly agree* = 5, *Agree* = 6, and *Strongly agree* = 7), so sum scores range between 5 (i.e., low life satisfaction) and 35 (i.e., high life satisfaction). In the referred study, the scale has shown a retest-reliability of .82 in a two-months interval and a Cronbach-α of .87. Construct validity was estimated by scale correlations of the SWLS with other subjective well-being scales[71], for which correlations between .50 and .75 were reported. The scale correlates negatively with neuroticism (r = -.48) and positively with self-esteem (r = .54).

1.3 Procedure

The procedure was similar to that in study 2: Participants received the PLS (Appendix B-2), then signed a consent form (Appendix B-3), and finally completed the provided questionnaires. Analogous to study 2, participants were asked to read the instructions and to provide only one answer per item with the exception of the category religious affiliation in the demographic section of the RDQ, in which multiple answers were allowed.

Participants were thanked, debriefed, and received a monetary compensation of 10 $A (approx. 7€) at completion of the inquiry. The researchers autographically inserted information on the RDQ's front page about the literacy of the participant and the city or town, in which the inquiry took place.

[71] Validation measures included: Cantril's (1965) Self-Anchoring Ladder; Gurin et al.'s (1960) one-item scale; Andrew's and Withey's (1976) D-T scale; Fordyce's (1978) single item measure on happiness; Fordyce's (1978) percent of time happy question; Campbell, Converse, and Rogers' (1976) scale; Bradburn's (1969) Affect Balance Scale; Tellegen's (1979) well-being scale of his Differential Personality Questionnaire; and Larson's (1983) Affect Intensity Measure.

1.4 Analysis

The statistical software SPSS 15.0 for Windows assisted the data analysis. Data were first analyzed for missing and invalid values, distribution patterns, and item-intercorrelations. The characteristic values (popularity, homogeneity, power) were determined, and an ANOVA checked the effect of the item presentation mode on the test scores. Raw scores were conversed into standardized values. Reliability of the RDQ was then estimated via internal consistency coefficients. Finally, the construct validity of the RDQ was assessed: The procedure involved factor analyses conducted for the total RDQ and, separately, for the four subscales. Eventually, correlation analyses determined whether the relationships of the EXP-DM and SWLS to the RDQ subscales, as well as the relationship among the four RDQ subscales went in the predicted direction.

2. Results

2.1 Preliminary analyses and data cleaning

The preliminary analyses involved a double strategy, in which simultaneously item parameters were assessed and data cleaning was applied. Although common practice, no unified standards exist in the matter of data cleaning in social research (Leahey, Entwisle, & Einaudi, 2003). Van den Broeck, Cunningham, Eckels, and Herbst (2005) proposed a framework involving data screening, diagnosis, and editing. In the data cleaning process (1) lack or excess of data, (2) strange distribution patterns, (3) outliers and inconsistencies, and (4) unexpected results or other types of inferences and abstractions are traced.

In the present study, lack or excess of data was determined through the missing and invalid values analysis. Strange distribution patterns were detected by comparing expectations about item distributions with empirical distributions derived from a histogram analysis. A scatter-plot analysis of item pairs assigned to the identical facets helped to identify cases of inconsistent responses. Unexpected results were detected through analyzing item-intercorrelations within the four RDQ subscales. Evaluating the results, suspect cases were deleted from the data set. The procedure of data cleaning is illustrated in Figure 14.

Each analytical step also provided statistical item parameters that helped to evaluate the data quality. As general indicators of data quality, this chapter concludes with an analysis of item characteristics, specifically item difficulty, homogeneity, and discriminatory power.

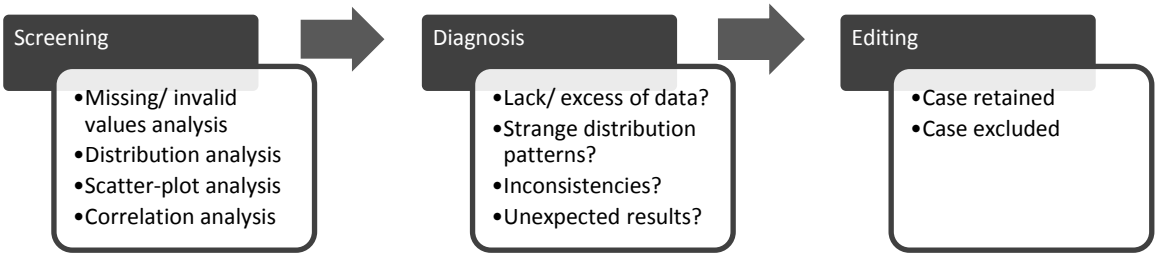


FIGURE 14: The process of data cleaning.

2.1.1 Missing and invalid values analysis

The identical definitions of missing and invalid values as in study 2 were applied. The following paragraphs report only those items and cases that caused more than 5% missing and invalid values within the total sample.

The only category in the demographic section complying with the 5% criterion was years at school, which resulted in eight missing (6.2%) and two invalid values (1.6%). In the case-wise analysis, frequent missing or invalid data were reported from five participants. Single occurrences of missing values in the demographic section were reported in another 16 cases.

In the item section of the RDQ, no item met the 5% criterion of missing or invalid data. In the case-wise comparison, only one participant produced over 5% missing and invalid values. With regard to the validation scales EXP-DM and SWLS, again, no item complied with the 5% criterion. The case-wise look revealed that one participant did not complete the questionnaires and, as a consequence, produced 100% missing values in this section. Furthermore, frequent invalid values to EXP-DM were detected in another two participants. A summary of the cases producing more than 5% missing and invalid values in the applied scales can be gauged from Table 7. Because the item-wise analysis revealed that only the category years at school showed more than 5% missing or invalid values, this category is not part of this summary.

TABLE 7: Missing and invalid data in study 3 from case-wise analysis.[a]

Scale/ Section	Case	Missing (*N*)	Missing (%)	Invalid (*N*)	Invalid (%)	Total (*N*)	Total (%)
RDQ-	203	1	12.5	-	-	1	12.5
Demographic	205	1	12.5	-	-	1	12.5
	222	2	25.5	-	-	2	25.0
	224	1	12.5	3	37.5	4	50.0
	234	1	12.5	-	-	1	12.5
	235	1	12.5	-	-	1	12.5
	242	-	-	1	12.5	1	12.5
	243	1	12.5	-	-	1	12.5
	261	1	12.5	-	-	1	12.5
	263	1	12.5	-	-	1	12.5
	283	1	12.5	-	-	1	12.5
	294	1	12.5	-	-	1	12.5
	304	3	37.5	-	-	3	37.5
	305	1	12.5	-	-	1	12.5
	307	1	12.5	-	-	1	12.5
	309	1	12.5	-	-	1	12.5
	315	1	12.5	-	-	1	12.5
	319	1	12.5	-	-	1	12.5
	320	2	25.0	-	-	2	25.0
	324	2	25.0	1	12.5	3	37.5
	325	1	12.5	-	-	1	12.5
RDQ- Item	210	3	4.9	1	1.5	4	6.4
EXP-DM	307	10	100.0	-	-	10	100.0
	309	-	-	10	100.0	10	100.0
	325	-	-	4	40.0	4	40.0
SWLS	307	5	100.0	-	-	5	100.0

Note. [a]Only cases causing ≥ 5% missing/ invalid values reported. Numbers (*N*) and percentages (%) are presented.

2.1.2 Distribution analysis

Equal to study 2, four types of distributions were expected: Bimodal distributions, left skewed distributions, right skewed distributions, and irregular distributions. Measures of central tendency are reported in Appendix D-3, including mean, median, standard deviation, skewness, and kurtosis. Predictions were formulated for each item with regard to distribution patterns that were based on results from the two previous studies and conceptual considerations. They are also presented in the table. Attention was specifically paid to items exhibiting strange distribution patterns as determined in a histogram analysis and through measures of central tendency. This concerned distributions (1) that diverged from the generally desired bimodal distributions and (2) that performed different than expected.

The preferred bimodal distribution was empirically confirmed for the majority of items. Deviations from bimodal distributions were observed in 28 items, 23 of which exhibiting biased distributions and five exhibiting irregular distributions (Table 8).

To better understand the data structure, biased and irregularly distributed items are reported for the four subscales separately. In the case of RDQ-T, eight items were affected by biased distributions. The RDQ-R had no biased items. Three items assigned to RDQ-A and 12 items assigned to RDQ-M showed response biases. No irregular distributions were observed in the RDQ-T and RDQ-A. The RDQ-R showed two and the RDQ-M three irregularly distributed items.

TABLE 8: Empirical distribution patterns of items in study 3.

Subscale	Distribution		
	Bimodal	*Biased*	*Irregular*
RDQ-T	8, 13, 14, 15, 21, 28, 36, 39, 58	1, 2, 23, 52, 57, 59, 62, 63	-
RDQ-R	7, 9, 12, 24, 38, 43, 48, 50, 53, 55	-	20, 45
RDQ-A	6, 18, 22, 29, 33, 34, 37, 47, 54, 56, 61	3, 42, 60	-
RDQ-M	10, 30, 31, 49, 51	5, 11, 16, 17, 19, 25, 26, 27, 32, 35, 40, 41	4, 44, 46

Note. Underlined item numbers indicate that predictions about distributions were empirically not confirmed.

Eight items performed different than expected. The prediction of a bimodal distribution was not confirmed for both items from facet 10: Item 40 showed a left skewed distribution, while item 4 demonstrated an irregular distribution pattern. Item 3 (facet 23) exhibited an affirmation bias rather than the predicted bimodal distribution. Oppositely, the reformulated negative item 52 (facet 31) that was expected to increase variance in responses relative to its predecessor item from study 2 still showed a tendency towards rejection. Items 20 and 45 (both facet 35) exhibited an irregular distribution pattern, rather than the expected bimodal distribution. The prediction of a left skewed distribution was not confirmed by item 10 (facet 18) and by item 21 (facet 33), which, in fact, showed bimodal distributions.

2.1.3 Scatter-plot analysis

In order to detect response inconsistencies, scatter-plots of corresponding item pairs within the facets were evaluated. Facets 1 to 12 are each composed of two positive items: Inconsistent responses were, therefore, diagnosed if participants gave an affirmative response (i.e., *Right* or *Somewhat right*) to one item and a disconfirming response (i.e., *Wrong* or *Somewhat wrong*) to the other item. Facets 14 and 35 are composed of one positive and one negative item: Consequently, inconsistencies were diagnosed if both items were simultaneously affirmed or disconfirmed. Facet 13 consists of two positive and one negative item. Three scatter-plots were produced to portray the possible item pairs in the facet. Inconsistencies were diagnosed corresponding to the previous examples.

The analysis was performed within 33 scatter-plots that included a total of 4191 item-to-item comparisons. Inconsistent responses were detected in 903 item-pairs (21.55%). A documentation of inconsistencies per facet is provided in Table 9. The table demonstrates that inconsistencies ranged between one and 51 cases (0,79% to 40,16%). Ten facets showed inconsistencies in more than 25% of the cases. Most affected was RDQ-M exhibiting four facets with highly inconsistent response patterns. RDQ-T, RDQ-R, and RDQ-A all contained two facets that showed high inconsistency.

Most participants responded inconsistent to at least one facet. A criterion was defined to classify those participants as highly inconsistent responders, who were inconsistent with regard to more than 13 item pairs (i.e., > 40% of the cases). It was expected that high inconsistent responders potentially presented obstacles to the later analyses. Two cases were detected and excluded from the data base.

TABLE 9: Inconsistent item responses in study 3.[a]

Facet (RDQ-T)	Inconsistency [*N*, (%)]	Facet (RDQ-R)	Inconsistency [*N* (%)]	Facet (RDQ-A)	Inconsistency [*N* (%)]	Facet (RDQ-M)	Inconsistency [*N* (%)]
1	16 (12.6)	3	36 (28.4)	4	37 (29.1)	2	19 (15.0)
5	1 (0.8)	8	31 (24.4)	7	33 (26.0)	6	17 (13.4)
13	#	14	29 (22.8)	15	29 (22.8)	9	42 (33.1)
26	34 (26.8)	19	51 (40.2)	24	30 (23.6)	10	32 (25.2)
22	11 (8.7)	28	27 (21.3)	23	28 (22.1)	11	30 (23.6)
21	36 (28.4)	35	28 (22.1)	20	25 (19.7)	12	14 (11.0)
31	22 (17.3)			29	16 (12.6)	16	7 (5.5)
33	19 (15.0)					25	41 (32.3)
						32	18 (14.2)
						18	50 (39.4)

Note. [a]Numbers (*N*) and percentages (%) of inconsistencies presented. # Facet 13: Items 8 and 36: *N* = 37 (29.1%); items 8 and 58: *N* = 28 (22.1%); items 36 and 58: *N* = 29 (22.8%).

2.1.4 Correlation analysis

It was expected that items within the four subscales demonstrated significant positive intercorrelations. Significant negative correlations were contradictory to this prediction. As a general impression, items showed a favorable intercorrelation pattern. Unexpected results specifically occurred in facets 13 (RDQ-T), 20, and 24 (both RDQ-A) that lacked from the expected positive correlations or even showed significant negative correlations to other items of the respective subscales. RDQ-A, however, appeared to be lacking of substantial intercorrelations on item and facet level. Significant negative correlations mainly occurred in RDQ-T (12 item pairs). Furthermore, one item pair in RDQ-R, as well as three item pairs in RDQ-A showed significant negative correlations. Tables of item-intercorrelations are attached in Appendix D-4.

2.1.5 Characteristic values analysis

The following paragraphs provide definitions of and results for the characteristic values item popularity, homogeneity, and power. A table presenting the statistical values is included in Appendix D-5.

Item popularity (p_{it}) was defined with Fisseni (1997) as sum of all item scores by the maximum score of all items or, expressed in a formula:

$$p_{it} = \frac{\sum X}{\sum X_{max}} \qquad (1.)$$

with:

$\sum X$ = sum of item scores over all test persons

$\sum X_{max}$ = sum of maximum item score over all items.

Accordingly, score values potentially range between 0 (= low item popularity) and 1 (= high popularity).

In RDQ-T, item popularities ranged between .10 and .95 with two items demonstrating low popularity and four items showing high popularity[72]. RDQ-R showed popularities between .32 and .72 and, consequently, neither ground nor ceiling effects. In RDQ-A, popularities ranged between .11

[72] According to Fisseni (1997, S. 124), popularity is low, if $p_{it} < .20$ and high, if $p_{it} > .80$.

and .95 with low and high popularity apparent in two items. RDQ-M showed popularities between .13 and .97. Low popularity was detected in six items and high popularity in three items.

Item homogeneity (H_{it}) was defined with Fisseni (1997) as average correlation of an item with all other items of a scale minus one (as presenting the correlation of the item with itself). The corresponding formula reads as follows:

$$H_{it} = \frac{\sum r_i}{N_{it} - 1} \qquad (2.)$$

with:

$\sum r_i$ = average correlation of item *i*

N_{it} = number of items in the scale/ subscale.

Analogous, homogeneity of the total subscale (H_{tot}) was defined as the averaged homogeneity of all items of a scale. Expressed in a formula that is:

$$H_{tot} = \frac{\sum H_{it}}{N_{it}} \qquad (3.)$$

with:

$\sum H_{it}$ = sum of all item homogeneities in the scale/ subscale

N_{it} = number of items in the scale/subscale.

Consequently, score values range between 1 (= homogeneous item/ subscale) and -1 (= heterogeneous item/ subscale).

In RDQ-T, item homogeneity ranged between -.058 and .141, and the subscale's total homogeneity amounted to .049. RDQ-R showed item homogeneities between .003 and .295, and a subscale homogeneity of .173. RDQ-A exhibited item homogeneities between -.078 and .078, and a subscale homogeneity of .025. RDQ-M showed item homogeneities between .033 and .184, and a subscale homogeneity of .115. The results indicated that the subscales were rather heterogeneous, a tendency most pronounced in RDQ-A.

The item power index (r_{it}) was defined as the item-subscale correlation, or:

$$r_{it} = \frac{cov\,(i,t) - SD_i^2}{SD_i * SD_t} \qquad (4.)$$

with:

cov (i, t) = Product-moment correlation of item score with corrected total score

SD_i^2 = variance of item *i*

SD_i = standard deviation of item *i*

SD_t = standard deviation of total score.

A score value 1 indicates perfect discriminatory power (i.e., items measure the same construct), 0 values indicate that the item lacks discriminatory power (i.e., measures a different construct), and negative values indicate that the item has discriminatory power into the opposite direction (e.g., in negative items).

In RDQ-T, the power index ranged between -.170 and .351 with low power[73] reported from 14 items. For RDQ-R, power indices between .018 and .560 with low power in four items were reported. RDQ-A showed power indices between -.302 and .301 with low power apparent in 13 items. In RDQ-M, the power index ranged between .074 and .521, and low power was reported in nine items. Particularly unfavorable negative power indices occurred in six items of RDQ-T and three items of RDQ-A.

2.1.6 Effect of item presentation method

An ANOVA was conducted to test for differences between literate participants (who answered the questionnaire) and illiterate participants (who were interviewed). In fact, 26 RDQ-items showed significant differences of mean scores in the two groups (i.e., literate vs. illiterate participants). Furthermore, three items from the EXP-DM scale exhibited significant group differences, while the SWLS-items showed no group effects. Table 10 presents the ANOVA statistics for items that demonstrated significant group differences. On subscale level, all four subscales exhibited significant group differences [RDQ-T: $F(1, 123) = 42.48$, $p < .001$, $\eta^2 = .257$; RDQ-R: $F(1, 123) = 7.79$, $p < .01$, $\eta^2 = .060$; RDQ-A: $F(1, 123) = 5.02$, $p < .05$, $\eta^2 = .039$; RDQ-M: $F(1, 123) = 8.09$, $p < .01$, $\eta^2 = .062$]. Clearly, the effect was most pronounced in RDQ-T. The direction of the differences found between the two groups was not systematic.

[73] According to Fisseni (1998), low power is diagnosed, if $r_{it} < .30$.

TABLE 10: ANOVA for item presentation method in study 3.[a]

Item		*df*	*F*	η^2
6	Between subjects	1	20.179**	.141
	Within subjects	123	(1.433)	
7	Between subjects	1	10.424**	.078
	Within subjects	124	(2.123)	
8	Between subjects	1	27.487**	.183
	Within subjects	123	(2.070)	
9	Between subjects	1	9.388**	.070
	Within subjects	125	(1.926)	
12	Between subjects	1	28.011**	.183
	Within subjects	125	(2.584)	
13	Between subjects	1	25.257**	.170
	Within subjects	123	(2.527)	
14	Between subjects	1	7.189**	.054
	Within subjects	125	(1.779)	
15	Between subjects	1	19.331**	.134
	Within subjects	125	(2.083)	
19	Between subjects	1	7.859**	.059
	Within subjects	125	(1.422)	
20	Between subjects	1	12.740**	.092
	Within subjects	125	(1.955)	
21	Between subjects	1	4.246*	.033
	Within subjects	124	(1.983)	
24	Between subjects	1	4.413*	.035
	Within subjects	123	(2.526)	
28	Between subjects	1	19.157**	.134
	Within subjects	124	(1.933)	
33	Between subjects	1	8.417**	.063
	Within subjects	125	(1.860)	
34	Between subjects	1	7.126**	.054
	Within subjects	124	(2.996)	
35	Between subjects	1	3.992*	.031
	Within subjects	125	(.944)	
36	Between subjects	1	19.025**	.132
	Within subjects	125	(2.294)	
39	Between subjects	1	13.763**	.100
	Within subjects	124	(2.126)	
42	Between subjects	1	27.724**	.183
	Within subjects	124	(1.398)	
45	Between subjects	1	5.031*	.039
	Within subjects	124	(1.772)	
46	Between subjects	1	8.052**	.061
	Within subjects	125	(2.112)	
50	Between subjects	1	12.490**	.092
	Within subjects	124	(1.991)	
53	Between subjects	1	5.531*	.042
	Within subjects	125	(2.151)	
57	Between subjects	1	6.581*	.050
	Within subjects	124	(.851)	
58	Between subjects	1	21.269**	.145
	Within subjects	125	(2.418)	
63	Between subjects	1	5.941*	.045
	Within subjects	125	(.411)	
EXP-DM1	Between subjects	1	5.148*	.040
	Within subjects	123	(1.594)	
EXP-DM6	Between subjects	1	4.772*	.037
	Within subjects	123	(2.135)	
EXP-DM9	Between subjects	1	9.536**	.073
	Within subjects	122	(1.804)	

Note. [a] Degrees of freedom (*df*), F-values (*F*), and effect size Eta^2 (η^2) presented. Values in parentheses represent mean square errors. *$p < .05$. **$p < .01$.

2.2 Scoring

Sum scores and standard scores were determined for the RDQ subscales, EXP-DM, and SWLS. Means and standard deviations derived from the sum scores of raw data for the four RDQ subscales can be gauged from Table 36. EXP-DM showed a mean of 12.80 and a standard deviation of 8.43, the SWLS exhibited a mean of 24.59 and a standard deviation of 7.68.

An ANOVA was applied to check whether the group factor Sex produced significant differences of mean scores in the RDQ subscales, and whether different standards were required for female and male subjects. However, no significant group differences were found with respect to the RDQ subscales (Table 11).

TABLE 11: Effects of factor sex on subscale score values in study 3.[a]

Subscale		*df*	*F*	η^2
RDQ-T	Between subjects	1	0.05	0.00
	Within subjects	123	(43.58)	
RDQ-R	Between subjects	1	0.00	0.00
	Within subjects	123	(80.08)	
RDQ-A	Between subjects	1	1.05	0.01
	Within subjects	123	(40.88)	
RDQ-M	Between subjects	1	1.38	0.01
	Within subjects	123	(147.01)	

Note. [a] Degrees of freedom (*df*), F-value (*F*), and effect size Eta^2 (η^2) presented. Values in parentheses represent mean square errors.

Subsequently, sum scores were standardized by percentile scores and standard-nine (stanine) values in order to allow conclusions about a person's relative position within the tested population. Norms were not determined because of the low sample size. Conversion tables are attached in Appendix D-6.

2.3 Reliability

Two indices reflecting the internal consistency of the RDQ subscales were determined: The Cronbach-α coefficient and the Spearman-Brown coefficient. Table 12 presents the reliability values of the RDQ subscales.

Cronbach-α coefficients ranged between .23 and .73, Spearman-Brown coefficients showed values between .18 and .69. The influence of intercorrelations on the reliability coefficients can be demonstrated by excluding facets that had previously shown particularly low or negative correlations within their subscale: If facet 13 was excluded from RDQ-T, Cronbach-α increased to .53 and the Spearman-Brown coefficient increased to .65. If the two RDQ-A facets 20 and 24 are excluded, Cronbach-α increased to .50 and the Spearman-Brown coefficient to .40 in that subscale.

TABLE 12: Cronbach-α and Spearman-Brown coefficients in study 3.

Subscale	RDQ-T	RDQ-R	RDQ-A	RDQ-M
Cronbach-α	.23	.72	. 31	.73
Spearman-Brown	.18	.69	.28	.59

2.4 Validity

2.4.1 Factorial validity

An explorative factor analysis was carried out to examine the factor structure of the four RDQ-subscales. Prior to the analysis, the *Kaiser-Meyer-Olkin* (*KMO*) criterion was applied to test whether the item selection supported a factor analysis. As Kaiser and Rice (1974) proposed, data are apt for a factor analysis if the *measure of sampling adequacy* (*MSA*) exceeds .50. Results from this study supported a factor analytical procedure in all RDQ subscales: The MSA amounted to .64 in RDQ-T, .76 in RDQ-R, .54 in RDQ-A, and .66 in RDQ-M. Further backing for a factor analytical procedure had been previously derived from the correlation analysis, which had demonstrated the ”bundle ability” of the data.

Principal component analyses (PCA) with Varimax rotation were applied to each of the four subscales separately. An additional Promax rotation did not result in a different factor allocation of items indicating a stable factor structure within this sample. The number of extracted factors was determined under utilization of the screeplot: The breaking point along the course of eigen values determined the last factor entering the interpretation. Velicer and Fava (1998) additionally suggested to interpret only factors represented by at least three variables to ascertain stable factor solutions.

With regard to RDQ-T, three factors entered the factor interpretation following the criterion of the screeplot break. These three factors explained a total of 41.59% of the variance. Items that were not represented within these factors were excluded from factor interpretation. Two items did not show the expected simple structure, but exhibited interpretable loadings on two factors: They were assigned to the factor that allowed the more stringent conceptual interpretation. Statistics from the factor analysis over RDQ-T are derived from Table 13. Only factor loadings > .40 are reported.

Based on item content, the three extracted factors were named *ingroup attachment* (four items), *outgroup adaptability* (four items), and *ingroup separation* (four items). The factor ingroup attachment contained items reflecting the individual’s sense of integration and proximity to the ingroup including the associated feeling of ethnic pride. The factor outgroup adaptability reflects the perception of cultural discontinuity and adaptation with majority culture. Because items 8, 36 and 58 had demonstrated negative correlations with the remaining items of the category, and item 28 was a negative item, this factor must be reversely interpreted. The factor ingroup separation contains items that reflect the individual’s absence from cultural activities. Because this factor is represented by negative items and shows negative loadings on positive items, this category also has to be reversely interpreted.

TABLE 13: Principal component analysis in RDQ-T in study 3.[a]

Item (facet, pole)	Factor 1 (Ingroup attachment)	2 (Outgroup adaptability, R)	3 (Ingroup separation, R)
2. There is racism against Aboriginal people in Australia. (1, +)			
59. Australian society is racist against Aboriginal people. (1, +)			
63. I feel part of the Aboriginal community. (5, +)	.88		
1. I feel a strong attachment to the Aboriginal community. (5, +)	.69		
8. Colonization has changed Aboriginal cultures forever. (13, +)		.74	
36. Aboriginal cultures and traditions are on the brink of dying out. (13, +)		.56	.41
58. White people did not affect Aboriginal cultures. (13, -)		-.65	
13. I practice traditional Aboriginal arts. (26, +)			-.52
39. I do not practice Aboriginal traditions. (26, -)			.67
23. I get along well with Aboriginal people. (22, +)	.55		
57. I do not get along with Aboriginal people. (22, -)			
15. I try to avoid contact with white people whenever I can. (21, +)			
28. I mingle with white people every day. (21, -)		.62	
14. I take important responsibilities in the Aboriginal community. (31, +)			-.69
52. I have no contact with Aboriginal communities. (31, -)	-.44		.51
62. I am proud to be Aboriginal. (33, +)	.85		
21. I am not proud to be Aboriginal. (33, -)			
Eigen values	2.67	2.14	1.84
s^2 (%)	15.67	12.61	10.82

Note. [a] Factor loadings, factor labels, eigen values, and explained variances (s^2) of the extracted factors presented. R: factor is reversely interpreted.

Three factors were extracted from RDQ-R that explained a total of 52.06% of the variance. Item 55 exhibited very low factor loadings on all factors and had to be excluded from the factor interpretation. Statistical indices are obtained from Table 14. Only factor loadings > .40 are reported.

The extracted factors were labelled *outgroup depreciation* (five items), *socio-political involvement* (three items), and *social injustice* (three items). The factor outgroup depreciation included items that reflect negativity in feeling, thought, and action towards outgroup members. Items grouped under the factor socio-political involvement included statements of organized socio-political action and group-related socio-political consciousness. The factor social injustice contained items that reflect the perception of social inequality and disadvantage of one's ingroup.

TABLE 14: Principal component analysis in RDQ-R in study 3.[a]

Item (facet, pole)	Factor 1 (Outgroup depreciation)	2 (Socio-polit. Involvement)	3 (Social injus-tice)
24. I experience racism every day of my life. (3, +)		.60	
43. I expect to experience racism when I am amongst white people. (3, +)			.61
48. I have negative views about white people. (8, +)	.72		
7. I feel angry towards white people. (8, +)	.71		
50. Aboriginal people are treated fairly in the Australian society. (14, -)			-.77
9. White people do not treat Aboriginal people as equals. (14, +)			.65
53. I tend to argue with white people. (19, +)	.47		
55. I am kind to white people. (19, -)			
12. I am a member of an Aboriginal rights organization. (28, +)		.79	
38. I am not a member of any Aboriginal rights organization. (28, -)		-.81	
20. I do not trust white people. (35, +)	.79		
45. I trust white people. (35, -)	-.59		
Eigen values	2.58	2.01	1.65
s^2 (%)	21.52	16.78	13.76

Note. [a] Factor loadings, factor labels, eigen values, and explained variances (s^2) of the extracted factors presented.

Three factors were extracted in RDQ-A that explained a total of 41.36% variance. The four items not represented in one of these factors were not part of the factor interpretation. Two items showed interpretable loadings on two factors and were assigned to the factor that allowed a meaningful conceptual interpretation. Factor loadings (> .40), eigen values, and explained variances are derived from Table 15.

The three factors were named *social fairness* (four items), *social agreeableness* (three items), and *outgroup approval* (three items). The factor social fairness includes items that reflect the perception of fairness and equality within society. Items arranged under the factor social agreeableness reflect a conventionalist attitude and behaviour that minimizes friction with in- and outgroup. The factor outgroup approval contains items that reflect the positive perception and immersion into the outgroup culture. Obviously, the latter two factors are conceptually related, an observation that is empirically supported by double loadings on both factors in two items.

TABLE 15: Principal component analysis in RDQ-A in study 3.[a]

Item (facet, pole)	Factor 1 (Social fairness)	2 (Social agree-ableness)	3 (Outgroup approval)
54. I have not been hassled for being Aboriginal. (4, +)	.49		
47. I have not been discriminated against. (4, +)	.73		
18. I think about white people positively. (7, +)			.81
6. White people have brought useful technologies to Australia. (7, +)		-.55	
61. Everyone has the same opportunities in Australia. (15, +)	.75		
29. White people have better opportunities than Aboriginal people. (15, -)	-.44		
34. I work more than 8 hours a day. (24, +)			
56. I work less than 8 hours a day. (24, -)			
3. I get along well with white people. (23, +)			.70
33. I do not get along with white people. (23, -)		.61	-.41
42. I try to avoid contact with Aboriginal people whenever I can. (20, +)		.76	
60. I mingle with Aboriginal people every day. (20, -)		-.46	-.40
22. When I hear the Australian national anthem I sing or hum along. (29, +)			
37. I never sing or hum along to the Australian national anthem. (29, -)			
Eigen values	1.79	1.73	1.69
s^2 (%)	12.77	12.36	12.08

Note. [a] Factor loadings, factor labels, eigen values, and explained variances (s^2) of the extracted factors presented.

Three factors were extracted in RDQ-M that explained 38.57% of the variance. Items not represented within the four factors were excluded from factor interpretation, which affected seven items. One item showed significant loadings on more than one factor and was interpreted within the factor that allowed the more stringent conceptual interpretation. Table 16 summarizes the findings. Only factor loadings > .40 are reported.

The extracted factors were named *ingroup devaluation* (six items), *alienation* (five items), and *deculturaltion* (three items). The factor ingroup devaluation was represented by items reflecting an attitude of detachment and depreciation regarding the ingroup. The factor alienation was composed of items that represented TRAM's Alienation category: Items reflect the defined pattern of social isolation, anomy, and depersonalization. The third factor represented a pattern of cultural disengagement as well as disintegration from ingroup and outgroup.

TABLE 16: Principal component analysis in RDQ-M in study 3.[a]

Item (facet, pole)	Factor 1 (Ingroup deval.)	2 (Aliena-tion)	3 (Decultu-ration)
35. There is no racism in Australia. (2, +)			
17. Real discrimination does not exist in Australia. (2, +)			
27. I feel no attachment to the Aboriginal community. (6, +)	.71		
19. Aboriginal culture is not relevant to today's world. (6, +)	.62		
30. I am at home in neither the Aboriginal community nor white society. (9, +)			.69
49. I have lost touch with Aboriginal culture but I am not part of Western culture. (9, +)	.43		
40. I feel different from all other people. (10, +)		.71	
4. I feel left out by society. (10, +)			.42
44. I do not meet the expectations of either the Aboriginal or the white culture. (11, +)		.46	
46. I do not know what others expect me to do. (11, +)		.64	
11. I feel confused about who I am. (12, +)		.72	
26. I feel uncertain about who I am. (12, +)		.63	
16. There is no value in Aboriginal traditions. (16, +)	.65		
32. Aboriginal cultures are worth to be kept alive. (16, -)	-.60		
31. I try to forget my problems by taking drugs or drinking alcohol. (25, +)			
51. I do not consume drugs or alcohol. (25, -)			
5. There is no point in teaching Aboriginal traditions to young Aboriginals. (32, +)	.80		
41. It is useful to pass on traditional Aboriginal knowledge to young Aboriginals. (32, -)			-.59
10. I tend to argue with Aboriginal people. (18, +)			
25. I am kind to Aboriginal people. (18, -)			
Eigen values	2.80	2.59	1.64
s^2 (%)	13.98	12.93	8.18

Note. [a] Factor loadings, factor labels, eigen values, and explained variances (s^2) of the extracted factors presented.

In a second step, a factor analysis determined the factor structure of the total RDQ. To increase interpretability, the approach of subsuming items into item parcels was taken. The item parcels were defined by the facets; consequently, the factor analysis was conducted on facet level. The MSA amounted to .66, so data were suitable for the procedure. A PCA with varimax rotation was applied, and the criterion of the screeplot break determined the number of extracted factors.

A four-factor structure was extracted from the total RDQ. Four facets were not part of the factor interpretation because they did not exhibit loadings > .40 on any factor. Secondary loadings were detected in three facets, so they were assigned to the conceptually more appropriate factor. Statistics are provided in Table 17.

The four factors were labelled *repulsive solidarity* (nine facets), *cultural disengagement* (eight facets), *alienation* (three facets), and *conflict consciousness* (seven facets). The factor repulsive solidarity includes facets that reflect resentment against the outgroup, activism for ingroup objectives, and seeking refuge in ingroup cultural practices. The factor cultural disengagement describes cognitive and emotional aspects of ingroup devaluation and detachment. The factor alienation was represented by the experience of social isolation, anomy, and depersonalization. The factor conflict con-

sciousness reflected awareness of racism directed against the person and ingroup, but also assumptions of cultural disruption and social inequality.

TABLE 17: Principal component analysis of RDQ in study 3.[a]

Facet	Factor 1 (Repulsive solidarity)	2 (Cultural disengagament)	3 (Alienation)	4 (Conflict consciousness)
1. Racism consciousness				.42
2. Racism denial				-.61
3. Racism vigilance			.44	.41
4. Racism ignorance				-.47
5. Pro ingroup		-.73		
6. Anti outgroup		.64		
7. Pro outgroup	-.55			
8. Anti ingroup	.50		.63	
9. Cultural estrangement		.53		
10. Social isolation			.55	
11. Anomy			.65	
12. Depersonalisation			.76	
13. Permanent damage	-.50			.46
14. Injustice				.73
15. System justification				-.50
16. Worthlessness		.74		
18. Hostility against ingroup				
19. Hostility against outgroup	.55			
20. Withdrawal from ingroup	.44			
21. Withdrawal from outgroup	.71			
22. Acceptance by outgroup		-.52		
23. Acceptance by ingroup	-.70			
24. Self-development				
25. Destructive escapism				
26. Retreat	.69			
28. Social activism	.56			
29. Conformism				
31. Strengthning ingroup		-.53		
32. Resignation		.67		
33. Ethnic pride		-.62		
35. Ethnic mistrust	.67			
Eigen values	4.89	3.83	2.84	1.79
s^2 (%)	15.76	12.37	9.15	5.76

Note. [a] Factor loadings, factor labels, eigen values, and explained variances (s^2) of both factor solutions presented.

2.4.2 Criterion validity

Correlation analyses were conducted to examine the relationship between the RDQ subscales, the EXP-DM, and the SWLS. Results are summarized in Table 18. Concerning the RDQ subscales, significant negative correlations were reported for RDQ-R and RDQ-A as well as RDQ-T and RDQ-A, while RDQ-T and RDQ-R as well as RDQ-R and RDQ-M exhibited significant positive correlations. Non-significant correlations were reported from RDQ-T and RDQ-M as well as RDQ-A and RDQ-M.

RDQ-T, RDQ-R, and RDQ-M showed positive correlations to EXP-DM. The relationship was most pronounced in RDQ-R. RDQ-A was not related to EXP-DM. The SWLS was significantly negative correlated to RDQ-R and RDQ-M, while RDQ-A exhibited a positive correlation with the scale. RDQ-T was not related to life satisfaction.

TABLE 18: Scale- and subscale-intercorrelations in study 3.[a]

	RDQ-R	RDQ-A	RDQ-M	EXP-DM	SWLS
RDQ-T	,337(**)	-,223(**)	-,048	,150(*)	,007
RDQ-R		-,305(**)	,193(**)	,283(**)	-,167(*)
RDQ-A			,022	-,082	,218(**)
RDQ-M				,176(*)	-,154(*)
EXP-DM					-,275(**)

Note. [a] Kendall's tau coefficient presented. *$p < .05$. ** $p < .01$.

3. Discussion

3.1 Statistical analyses

Results from study 3 generally provided a positive picture regarding the applicability of the RDQ to the Australian context. Item parameters were mainly favorable and the underlying hypotheses were partly confirmed. However, some critical points revealed in the course of the analyses are discussed in the following paragraphs.

The distribution analysis has shown that a substantial proportion of items were biased. However, item popularity (as an indicator of item bias) and homogeneity are directly related: If items in a subscale exhibit a similar popularity a homogenous test results, while, oppositely, differing popularities within a subscale increase heterogeneity (Lienert & Raatz, 1994). Furthermore, the differentiating power is optimal in items of medium popularity, and consequently decreases if items show high

or low popularity. These relationships illustrate that biases – most evident in RDQ-T and RDQ-M – potentially adversely affected the homogeneity and discriminatory power of items within the subscales. It is likely that some of the non-significant item-intercorrelations were caused by the deviances in the item distribution pattern. Alternatively, the heterogeneity may have been caused by the subscales' composition of various facets each representing a distinct theoretical concept. Naturally, the proposed relatedness of distinct concepts is hypothetical and may not be confirmed empirically.

RDQ-A performed unfavorable in the intercorrelation analysis. Observing the otherwise satisfying distribution patterns in most items, it could be argued that the facets truly lacked the postulated substantial relationships in this sample. Alternatively, the somewhat low sample size possibly prevented the relationships from becoming significant.

Three facets – facet 13 (RDQ-T), 20, and 24 (both RDQ-A) – showed low interrelations within their subscales and, therefore, appeared to contradict the postulation that they present defining subscale characteristics. The low reliabilities of RDQ-T and RDQ-A, and the fact that excluding the derogatory facets from the analysis substantially increased the subscales' reliabilities seem to support this interpretation.

Hypothesis I had to be rejected for the Australian study: Reliabilities generally remained below the expectation. This result is probably due to the heterogeneity within the subscales. Unfortunately, the more adequate method of assessing reliability in heterogeneous (sub-)scales, a re-test assessment, was not applicable in this study. As a consequence, estimation of the RDQ's reliability remains incomplete in the Australian context.

A number of analyses indicated the RDQ's good construct validity. The factor analysis approved the postulated four-factor structure of the RDQ, which confirmed the first part of *hypothesis II*. The items and facets, of which each factor was composed, only partly reflected the hypothesized structure. However, analyzing and interpreting the four factors, conceptual resemblance undoubtedly appeared between the four subscales and the respective response styles: The factors social consciousness (unprompted four-factor solution) and conflict consciousness (predefined four-factor solution) reflected some of the defining patterns of the traditionalist style. The factors enmity (unprompted four-factor solution) and repulsive solidarity (predefined four-factor solution) showed substantial overlap to the revulsionist style; cultural disengagement (identically labelled in both factor solutions) in many aspects resembled the assimilationist style. Alienation (identically labelled in both factor solutions), however, stood somewhat isolated from other facets. The second part of h*ypothesis II* was, as a result, partly confirmed.

With regard to the intercorrelations of RDQ-subscales, predictions of *hypothesis III* were partly confirmed. Items in RDQ-T and RDQ-R were generally more readily affirmed than items in RDQ-A in the Australian sample (see popularity parameters), a tendency that perhaps explains the unexpected

significant positive correlation of RDQ-T and RDQ-R, as well as the unpredicted significant negative correlation of RDQ-T and RDQ-A. However, the predicted significant negative relationship of RDQ-R and RDQ-A was confirmed, which underlines the postulated contradictory qualities of the revulsionist and assimilationist style.

Correlations of the RDQ subscales, the EXP-DM, and the SWLS partly confirmed *hypotheses IV* and *V*. Responses to EXP-DM indicated that participants rarely disconfirmed perceived racism. This tendency had yet appeared in the biased distributions obtained from the four RDQ-facets assessing racism awareness. Consequently, the proposed positive relationship of the EXP-DM with RDQ-T and RDQ-R was confirmed. The proposed negative relationship of RDQ-A and RDQ-M was empirically not replicated. In fact, RDQ-A was the only subscale not exhibiting a significant positive relationship to EXP-DM. This result implies that in the Australian Aboriginal people only the assimilationist response style is not characterized by perceptions of personal and/ or group discrimination. However, the lack of a significant negative relationship between RDQ-A and EXP-DM also indicates that experiences of discrimination are not absent in characteristic assimilationists: Instead, interindividual variability of such experiences is increased or the readiness to report experiences of discrimination may be lower in some assimilationists. Such tendencies could be explained with a system justification response that is proposed to be characteristic of the assimilationist style and that perhaps prompts assimilationists to deny or minimize their experiences with discrimination. Alternatively, a proportion of assimilationists may fall into the category of *passing* minority group members, who are – due to an elevated socio-economic status or the lack of typical phenotype characteristics of the minority group – in fact subjected to discrimination at a lower frequency.

The prediction that response styles located at the pole disintegration (i.e., the revulsionist and marginalist styles) are characterized by a negative relationship to life satisfaction was empirically confirmed. Response styles aligned to the integration pole were predicted to be positively related to life satisfaction, but the prediction was confirmed only for the assimilationist style. The traditionalist style was instead not related to life satisfaction. Perhaps this result is a reflection of the stressors related to minority group status traditionalists are objected to (e.g., disruption within the respective indigenous communities, social deprivation, and oppression by the dominant group). At the same time, traditionalists benefit from the protective effects of ingroup identification[74] that the revulsionists and marginalists lack. The combined effect of racism-related stressors and protective variables may account for the lack of a relationship between RDQ-T and the SWLS.

[74] In the sense of Branscombe and colleagues' (1999) rejection-identification model (chapter 2.2.2, Introduction).

3.2 Sample

High response inconsistency resulted in the exclusion of three cases from the advanced analyses. Another limitation of the sample presented the still relatively high quantity of illiterate participants that were inquired applying a different assessment method: While literate participants received the printed version of the questionnaire, the illiterate persons were provided a full-structured interview. Various artefacts might have interfered, like the perceived degree of autonomy and anonymity of the inquiry, mental processing of linguistic information via the visual vs. auditory sensory channels, or the degree of abstraction by external events. In fact, results indicated that a substantial number of items and all four subscales were confounded by the person characteristic literacy.

However, the inclusion of illiterate participants is also a substantial strength of this study: Although representing the majority within the Aboriginal population, it is unprecedented that such a great proportion of illiterate Aboriginal people have contributed data to a psychological investigation. Despite the deficiencies that arise from sample subgroups that illiterate participants present, the benefits of this approach lie in the various perspectives people have provided to this study.

Women were over-represented in this study. However, the sex variable did not result in significant score differences. Despite the diversity of the social background in the recruits, the socioeconomic status of participants in this study is above average compared to the general Aboriginal population. This bias is due to the recruitment of professional workers in the urban context that made up a significant proportion within the total sample. The motivation to participate in the study was perhaps external in some participants, as an expense allowance was paid. Specific response biases, like social desirability tendencies, may have resulted from an external motivation. Nevertheless, the applied strategy was appropriate because it ensured that a large number of people participated in a short time, which was part of the necessities arising from a validation study.

STUDY 4: CHILEAN MAPUCHE STUDY

In the Chilean Mapuche study, the study 3 version of the RDQ was translated into a Castilian[75] language format and applied in a large sample of Chilean Mapuche people. The aim of the study was to assess the chances and limits for a cross-cultural application and comparison of the RDQ: Identical analyses as in study 3 were conducted, including the determination of item characteristics as well as of reliability and validity. Furthermore cross-cultural analyses were carried out: Sample characteristics, item distribution patterns, and characteristic values from study 3 and study 4 were compared. It was examined whether the Australian and Chilean samples differed in their subscale and item scores. Finally, the comparability of the determined reliability coefficients and the factorial agreement in study 3 and study 4 were assessed.

1. Method

1.1 Subjects

The inquiry took place between May and July 2008 in the Metropolitan Province (RM) and the Ninth Province (IX) of Chile. Participants were recruited from partner institutions (e.g., staff at local universities and Mapuche land councils), on central locations (e.g., hospitals, universities, market places, bus stations), and amongst the acquaintances of the Chilean research assistants.

A total of 179 Mapuche people completed the questionnaire, of which 83 were male (46.4%) and 95 female (53.1%). Six participants (3.4%) were illiterate and received a full-structured interview; 173 participants were literate and responded autonomously. The participants were between 18 and 78 years of age (M = 39.93, SD = 15.41). Further demographic data can be retrieved from Table 19[76]. Due to time and financial restrictions, the specific recruitment strategy, and the situational context, sampling necessarily followed a convenience approach. As a consequence, the sample was not representative.

[75] The particular Spanish language Castilian is used throughout this dissertation when referred to the Chilean language format of the RDQ.

[76] For the convenience of the reader, the variables are provided in English. The Castilian formulations can be gauged from the demographic section of the Castilian RDQ version (Appendix E-3).

TABLE 19: Demographic characteristics of sample in study 4.[a]

Variable	*Specification*	*N (%)*	*M, SD, Min, Max*
City / township	Santiago (RM)	47 (26.3)	
	Temuco (IX)	92 (51.4)	
	Galvarino (IX)	9 (5.0)	
	Lautaro (IX)	7 (3.9)	
	Perquenco (IX)	6 (3.4)	
	Cunco (IX)	5 (2.8)	
	Vilcún (IX)	5 (2.8)	
	Melipeuco (IX)	8 (4.5)	
Sex	Male	83 (46.4)	
	Female	95 (53.1)	
Age (years)			M = 39.93, SD = 15.41, Min = 18, Max = 78
Literacy	Literate	173 (96.6)	
	Illiterate	6 (3.4)	
Educational level (years)			M = 11.69, SD = 3.32, Min = 0, Max = 17
Marital status	Single	74 (41.3)	
	De facto	18 (10.1)	
	Married	77 (43.0)	
	Separated	7 (3.9)	
	Divorced	1 (0.6)	
	Widowed	2 (1.1)	
	Other	0 (0.0)	
Employment status	Employed	88 (49.2)	
	Unemployed	15 (8.4)	
	Pension	11 (6.1)	
	Homemaker	29 (16.2)	
	Student	28 (15.6)	
	Retired	3 (1.7)	
	Other	5 (2.8)	
Religious affiliation	Mapuche	53 (29.6)	
	Christian	91 (50.8)	
	Other	1 (0.6)	
	None	27 (15.1)	
	Mapuche + Christian	7 (3.9)	
Spoken language(s)	Castilian only	67 (37.4)	
	Castilian better than Mapundungun[b]	73 (40.8)	
	Castilian and Mapundungun equally	34 (19.0)	
	Mapundungun better than Castilian	1 (0.6)	
Living area	Rural area, Mapuche community	46 (25.7)	
	Rural area, away from Mapuche community	6 (3.4)	
	Urban area	127 (70.9)	

Note: [a] Total numbers (*N*), percentages (%), means (*M*), standard deviations (*SD*), minimum (*Min*), and maximum values (*Max*) are presented. [b]The term Mapundungun refers to the local indigenous language of the Mapuche people.

1.2 Material

The inquiry involved the application of the shortened study 3 version of the RDQ translated into Castilian and adapted to the Chilean context.

The translation was based on the committee approach (chapter 3.3, Introduction). Five researchers from different fields of professional expertise were involved in the translation: Two had a background in psychology, specifically in test development. Three researchers had a professional background in cultural sciences (i.e., Anthropology and Religious Studies), one being specialized in indigenous cultures in Australia and Chile, one being acquaintened with field studies in Mapuche communities, and one being trained in Chilean indigenous studies. Three of the involved researchers were Chilean and bilingual (i.e., first language Castilian, second language English). Two researchers were German and proficient in English as well as Castilian. The committee cooperatively translated the instrument in one extensive session.

The adaptation of the instrument during the translation process involved both, linguistic and contextual editing: 1) Adaptation of context-specific vocabulary: 1a) The terms *Aboriginal people*/ *Aboriginal* (as reference to ingroup) were replaced by *pueblo Mapuche*/ *Mapuche*(*s*); 1b) the expressions *white people*/ *white*/ *Western* (as reference to outgroup) were replaced by *personas huincas*/ *huinca*; 1c) the term *Australia*/ *Australian* was replaced by *Chile*/ *chilena* (*-o*/ *-as*/ *-os*). 2) Adaptation of culture-specific context: The category living area in the demographic section required restructuring to fit the Chilean context. In difference to Australia, the urban areas have no segregated indigenous residential areas in Chile. Therefore, the differentiation of indigenous and non-indigenous urban residential areas was redundant and, thus, excluded from the Chilean adapted RDQ. 3) Adaptation of the answering format: The English scale differentiating *Wrong – Somewhat wrong – Not sure – Somewhat right – Right* responses was conceptually not transferrable into the Castilian language format. The only alternative was to return to the original Likert format and to distinguish *Strongly disagree – Disagree – Not sure – Agree – Strongly agree* (i.e., *Muy en desacuerdo* = 0, *En desacuerdo* = 1, *No estoy seguro* = 2, *De acuerdo* = 3, *Muy de acuerdo* = 4). 4) Adaptation of grammar: Items 43 and 46 had to be transferred into a conditional tense in the Castilian version.

1.3 Procedure

Data collection was conducted in cooperation with the Institute for Indigenous Studies (Universidad de La Frontera, Temuco, Chile). Six research assistants were involved in recruiting participants, of which one was a Mapuche Chilean, four were non-Mapuche Chileans, and one was German. Data

acquisition was ensued analogous to the previous studies: Participants first received the translated PLS (Appendix E-1), then signed the translated consent form (Appendix E-2), and finally completed the RDQ (Appendix E-3). They were, correspondingly, asked to read the instructions and to provide only one answer per item with the exception of the demographic category religious affiliation, which was open to multiple responses.

A second recruitment strategy involved an electronic invitation via Email to participate in the investigation. A total of 172 Mapuche people from public institutions and an additional 23 Mapuche organizations were approached in this manner. Email addresses were acquired by searching through the internet staff directories of Chilean public and private universities, as well as the Mapuche land councils[77] for paternal and maternal Mapuche surnames. The selected people were sent an invitation via Email with a practically identical content to the PLS; the consent form and questionnaire were attached as *pdf*-files. Participants were asked to return the completed consent form and RDQ to a central postal address at the Institute for Indigenous Studies.

Participants were thanked and debriefed if the procedure allowed it. None of the participants received a monetary compensation. The research assistants autographically inserted information on the RDQ's front page about the literacy of the participant, and the city or town where the inquiry took place.

1.4 Analysis

Data are analyzed utilizing the statistical software SPSS 15.0 for Windows. Analogous to study 3, analyses commenced with the determination of missing and invalid values, distribution patterns, item-intercorrelations, and characteristic values. The check for effects of the factor oral vs. written item presentation was dispensed for the low number of illiterate participants in the Chilean sample. Subsequently, raw scores were conversed into standardized values. Reliability was determined via internal consistency coefficients. The assessment of construct validity involved factor analyses and subscale-intercorrelations.

Subsequently, cross-cultural analyses of the English and Castilian RDQ versions from study 3 and study 4 were conducted. Missing values, distribution patterns, inconsistencies, and characteristic values (i.e., popularity, homogeneity, discriminatory power) were checked for congruency. An item bias analysis explored whether effects of the cultural factor on item performance were significant.

[77] That is the National Cooperation for Indigenous Development (Corporación Nacional de Desarrollo Indígena, CONADI).

Reliabilities were examined for statistical significance of numerical differences. The factorial agreement between the two versions was assessed.

2. Results

2.1 Preliminary analyses and data cleaning

The aim and procedure of the preliminary analyses and data cleaning have been described thoroughly in chapter 2.1 (study 3). As a result of the screening procedures, the data were cleaned and the item parameters determined.

2.1.1 Missing values analysis

The identical definitions of missing and invalid values as in study 2 and study 3 were applied. Only items and cases are reported that produced over 5% missing and invalid values in the total sample.

None of the categories in the demographic section caused more than 5% missing and invalid values. The case-wise analysis, however, revealed that five participants produced one missing value (i.e., 12.5%).

With regard to the item section, item 46 produced 12 missing values (6.5%) and was the only item complying with the > 5% criterion. The case-wise analysis revealed that eleven participants produced more than 5% missing and invalid data. A summary of the cases producing more than 5% missing and invalid values is provided in Table 20. Because the item-wise analysis revealed only item 46 to show more than 5% missing or invalid values, item-wise results are not included in the summary.

TABLE 20: Missing and invalid data in study 4 from case-wise analysis.[a]

Section	Case	Missing (*N*)	Missing (%)	Invalid (*N*)	Invalid (%)	Total (*N*)	Total (%)
RDQ-	51	1	12.5	-	-	1	12.5
Demographic	125	1	12.5	-	-	1	12.5
	136	1	12.5	-	-	1	12.5
	163	1	12.5	-	-	1	12.5
	165	1	12.5	-	-	1	12.5
RDQ-Item	3	10	14.1	-	-	10	14.1
	61	5	7.0	-	-	5	7.0
	62	7	9.9	-	-	7	9.9
	65	8	11.3	-	-	8	11.3
	102	9	12.7	-	-	9	12.7
	105	3	4.2	1	1.4	4	5.6
	114	5	7.0	-	-	5	7.0
	115	5	7.0	-	-	5	7.0
	130	7	9.9	2	2.8	9	12.7
	136	6	8.5	-	-	6	8.5
	141	4	5.6	-	-	4	5.6

Note. [a] Only cases causing ≥ 5% missing/ invalid values of total reported. Numbers (*N*) and percentages (%) presented.

2.1.2 Distribution analysis

With reference to results from study 2 and study 3, it was expected that distributions showed bimodal, left skewed, right skewed, and irregular patterns. Measures of central tendency are reported in Appendix D-3, including mean, median, standard deviation, skewness, and kurtosis. Predictions about distributions were oriented on the predictions formulated in study 3 – based on the assumption of universality of the underlying concept – and are presented in the same table. Attention was specifically paid to items with strange distribution patterns as determined from the histogram analysis and the measures of central tendency. This concerned distributions (1) that diverged from the generally desired bimodal distributions and (2) that performed different than expected.

The preferred bimodal distribution was confirmed in 25 items. Of the thirty-eight diverging items, 25 items showed biased distributions and 13 items exhibited irregular distributions. Biased items were primarily observed in RDQ-T (nine items) and RDQ-M (12 items). One biased item occurred in RDQ-R and three in RDQ-A. Most irregularly distributed items were reported from RDQ-R (six items). RDQ-T showed one, RDQ-A and RDQ-M both three irregularly distributed items.

Nineteen items performed different than predicted. This result was primarily due to items that were expected to be bimodal distributed, but in fact showed irregular distributions. In items 7, 15, 31, and 58 left skewed rather than the predicted bimodal distributions were observed. Oppositely, items 28 and 29 showed right-skewed instead of the expected bimodal distributions. Item 60 was

predicted to show a right slope, while a left slope was expected for item 21. Instead, these two items were bimodal distributed. Results are summarized in Table 21.

TABLE 21: Empirical distribution patterns of items in study 4.

Subscale	Distribution		
	Bimodal	*Biased*	*Irregular*
RDQ-T	13, 14, 21, 36, 39, 52, 59	1, 2, 15, 23, 28, 57, 58, 62, 63	8
RDQ-R	12, 24, 38, 50, 53	7	9, 20, 43, 45, 48, 55
RDQ-A	22, 34, 37, 47, 54, 56, 60, 61	3, 29, 42	6, 18, 33
RDQ-M	10, 30, 40, 49, 51	5, 11, 16, 17, 19, 25, 26, 27, 31, 32, 35, 41	4, 44, 46

Note. Underlined item numbers indicate that predictions about distributions were not confirmed empirically.

2.1.3 Scatter-plot analysis

To identify cases of inconsistent responding, scatter-plots were analyzed for the 31 RDQ facets analogous to study 3 (chapter 2.1.3, study 3). Thirty-three item pairs and a total of 5907 cases were analyzed. As a result, 960 cases (16.25%) of inconsistent responding were detected. Table 22 reports the total and relative amounts of inconsistency. It is shown that the frequencies of inconsistent responses ranged between a total of eight and 56 cases (4.47% and 31.28%) in the analyzed item-pairs. Five facets showed inconsistencies in over 25% of the cases. Two of the relatively high inconsistent facets were assigned to both, RDQ-T and RDQ-M, and one to RDQ-R. One case was classified highly inconsistent exceeding the criterion of more than 40% inconsistent responses and was consequently excluded from the data set.

TABLE 22: Inconsistent item responses in study 4.[a]

Facet (RDQ-T)	Inconsistency [*N*, (%)]	Facet (RDQ-R)	Inconsistency [*N* (%)]	Facet (RDQ-A)	Inconsistency [*N* (%)]	Facet (RDQ-M)	Inconsistency [*N* (%)]
1	17 (9.5)	3	29 (16.2)	4	25 (14.0)	2	22 (12.3)
5	8 (4.5)	8	28 (15.6)	7	30 (16.8)	6	29 (16.2)
13	#	14	38 (21.2)	15	27 (15.1)	9	46 (25.7)
26	19 (10.6)	19	48 (26.8)	24	28(15.6)	10	50 (27.9)
22	21 (11.7)	28	25 (14.0)	23	24 (13.4)	11	19 (10.6)
21	24 (13.4)	35	16 (9.0)	20	31 (17.3)	12	13 (7.3)
31	47 (26.3)			29	25 (14.0)	16	13 (7.3)
33	30 (16.8)					25	38 (21.2)
						32	10 (5.6)
						18	37 (20.7)

Note. [a]Numbers (*N*) and percentages (%) of inconsistencies presented. # Facet 13: Items 8 and 36: *N* = 54 (30.2%); items 8 and 58: *N* = 33 (18.4%); items 36 and 58: *N* = 56 (31.3%).

2.1.4 Correlation analysis

Generally, the four subscales showed a favorable pattern of item-intercorrelations. Facets 13 (RDQ-T) and 24 (RDQ-A) performed deficient within their respective subscales showing no or few relations with other items from the subscale. In RDQ-T, items 14 and 36 showed a negative relationship. Negative correlations were also apparent in items 35 and 40, and items 19 and 49, both pairs being assigned to RDQ-M. Appendix E-4 summarizes the item-intercorrelations.

2.1.5 Characteristic values analysis

The characteristic values popularity, homogeneity, and power were defined identically as in study 3 (chapter 2.1.5, study 3). The statistical parameters are presented in Appendix D-5.

Item popularity ranged between .17 and .94 in RDQ-T. Low popularity was reported for two items, while five items showed high popularity. RDQ-R items showed popularities between .25 and .73. In RDQ-A, item popularities ranged between .05 and .90. Low popularity was apparent in two items, while one item was highly popular. Items assigned to RDQ-M showed popularities between .13 and .97. Low popularity was present in seven items, while three items were highly popular.

Item homogeneity ranged between .015 and .254 in RDQ-T. The total homogeneity amounted to .161. RDQ-R showed item homogeneities between .155 and .335, and a total homogeneity of .254. Item homogeneity ranged between .027 and .236 in RDQ-A, the total homogeneity amounted

to .134. RDQ-M produced item homogeneities between .039 and .214, and a total homogeneity of .127. Results, consequently, indicated rather heterogeneous subscales, though the tendency was less pronounced in RDQ-R.

Item power ranged between -.004 and .598 in RDQ-T, with eight items showing a particularly low power. In RDQ-R, power indices ranged between .219 and .666, with low power reported from two items. RDQ-A exhibited power indices between .093 and .560, and low power in eight items. In RDQ-M, power indices ranged between .078 and .436, with low power reported from 12 items. Specifically unfavorable negative power indices occurred in two items, both assigned to RDQ-T.

2.2 Scoring

Sum scores were determined in the four RDQ subscales. Means and standard deviations derived from the four sum scores are presented in Table 36.

An ANOVA was applied to test whether method effects were confounded with the group factor Sex. Table 23 illustrates that a significant group difference existed in RDQ-R. However, because the effect size was small, the group difference was not further considered in the determination of standard scores.

Raw scores were now assigned percentile scores and stanine values to allow conclusions about a person's relative position within the tested population. Conversion tables are attached in Appendix E-5.

TABLE 23: Effects of the factor sex on subscale score values in study 4.[a]

Subscale		*df*	*F*	η^2
RDQ-T	Between subjects	1	1.99	0.011
	Within subjects	175	(120.45)	
RDQ-R	Between subjects	1	5.02*	0.028
	Within subjects	174	(338.67)	
RDQ-A	Between subjects	1	3.27	0.018
	Within subjects	175	(164.96)	
RDQ-M	Between subjects	1	0.12	0.001
	Within subjects	168	(6.43)	

Note. [a] Degrees of freedom (*df*), F-value (*F*), and effect size Eta^2 (η^2) presented. Values in parentheses represent mean square errors. *$p < .05$.

2.3 Reliability

Cronbach-α and the Spearman-Brown coefficient were determined for each RDQ subscale. Findings are summarized in Table 24. Cronbach-α coefficients ranged between .65 and .82, Spearman-Brown coefficients showed values between .69 and .77. RDQ-R was the most reliable subscale in study 4, while RDQ-M showed the comparably weakest reliability coefficients.

Analogous to study 3, the influence of low item-intercorrelations on the reliabilities was assessed. In the correlation analysis, items assigned to facets 13 and 24 had demonstrated low or negative relationships with other items of the same subscale. If facet 13 was deleted from RDQ-T, Cronbach-α increased to .71 and Spearman-Brown increased to .72. Deletion of facet 24 from RDQ-A increased Cronbach-α to .73, but decreased Spearman-Brown to .72.

TABLE 24: Subscale reliabilities in study 4: Cronbach-α and Spearman-Brown coefficients.

Subscale	RDQ-T	RDQ-R	RDQ-A	RDQ-M
Cronbach-α	.69	.82	. 68	.65
Spearman-Brown	.70	.77	.74	.69

2.4 Validity

2.4.1 Factorial validity

Before the analysis, the MSA was determined. With MSAs of .69 (RDQ-T), .79 (RDQ-R), .63 (RDQ-A), and .65 (RDQ-M), respectively, results demonstrate that the data were apt of a factor analytical procedure.

Analogous to study 3, a PCA with varimax rotation was applied to the four subscales. The screeplot break determined the number of extracted factors. An additional promax rotation did not result in a different factor allocation of items. Only factor loadings equal or larger than .40 are reported.

Three factors were extracted from RDQ-T that explained a total of 43.03% variance. Items not representing these factors were not part of the factor interpretation. Two items exhibited parallel loadings and were assigned to the factor that allowed a conceptually meaningful interpretation. Statistical indices are obtained from Table 25. Only factor loadings > .40 are reported.

The four extracted factors were labeled *ingroup engagement* (three items), *outgroup impact* (three items), and *ingroup affinity* (four items). The factor ingroup engagement contained items re-

flecting the individual's physical involvement with ingroup activities. The factor outgroup impact integrates items that reflect an individual's consciousness for the destructive impact and racism imposed by the outgroup on the ingroup. The factor ingroup affinity is composed of items reflecting an individual's sense of ingroup attachment and ethnic pride, but also engagement in outgroup transactions.

TABLE 25: Principal component analysis in RDQ-T in study 4.[a]

Item (facet, pole)	Factor		
	1 (Ingroup engagem.)	2 (Outgroup impact)	3 (Ingroup affinity)
2. Hay racismo contra los Mapuches en Chile. (1, +)		.87	
59. La sociedad chilena es racista contra los Mapuches. (1, +)		.73	
63. Me siento parte del pueblo Mapuche. (5, +)	.59		
1. Siento un fuerte apego por el pueblo Mapuche. (5, +)			
8. La colonización ha cambiado la cultura Mapuche para siempre. (13, +)			.70
36. La cultura y las tradiciones Mapuches están a punto de desaparecer. (13, +)			.81
58. Los huincas no afectaron a la cultura Mapuche. (13, -)		-.70	
13. Practico artes tradicionales Mapuches. (26, +)	.86		
39. No practico tradiciones Mapuches. (26, -)	-.86		
23. Me llevo bien con las personas Mapuches. (22, +)		.42	
57. No me llevo bien con las personas Mapuches. (22, -)			
15. Trato de evitar el contacto con huincas cada vez que puedo. (21, +)			
28. Me junto con huincas todos los días. (21, -)			
14. Tengo responsabilidades importantes en el pueblo Mapuche. (31, +)	.71		
52. No tengo contacto con comunidades Mapuches ni en el campo ni en la ciudad. (31, -)	-.73		
62. Tengo orgullo de ser Mapuche. (33, +)			
21. No me siento orgulloso de ser Mapuche. (33, -)			
Eigen values	3.47	1.87	1.54
s^2 (%)	20.39	10.99	9.05

Note. [a] Factor loadings, factor labels, eigen values, and explained variances (s^2) of the extracted factors presented.

Two factors were extracted from RDQ-R that explained a total of 47.22% variance. Items not exhibiting relevant loadings on the extracted factors were not part of the factor interpretation. Factor loadings (> .40), eigen values, and explained variances are summarized in Table 26.

The extracted factors were named *outgroup depreciation* (four items) and *social inequality* (three items). The factor outgroup depreciation included items that reflect negativity in feeling, thought, and action towards outgroup members. Items grouped under the factor social inequality included items that reflected awareness of racism and social disadvantage of the ingroup.

TABLE 26: Principal component analysis in RDQ-R in study 4.[a]

Item (facet, pole)	Factor	
	1 (Outgroup deprec.)	2 (Social inequality)
24. Cada día de mi vida experimento racismo. (3, +)		
43. Cuando esté entre huincas es probable que experimente racismo. (3, +)		
48. Tengo una imagen negativa sobre los huincas. (8, +)	.82	
7. Siento rabia hacia los huincas. (8, +)		
50. Los Mapuches son tratados de manera justa por la sociedad chilena. (14, -)		
9. Los huincas no tratan a los Mapuches como personas iguales a ellos. (14, +)		
53. Tiendo a discutir con los huincas. (19, +)	.66	
55. Soy amable con los huincas. (19, -)		
12. Soy miembro de una organización Mapuche. (28, +)		.90
38. No soy miembro de ninguna organización mapuche. (28, -)		-.88
20. No confío en los huincas. (35, +)	.75	
45. Confío en los huincas. (35, -)	-.83	
Eigen values	2.72	1.91
s^2 (%)	22.64	15.91

Note. [a] Factor loadings, factor labels, eigen values, and explained variances (s^2) of the extracted factors presented.

Screeplot analysis resulted in three factors explaining a total of 46.80% variance in RDQ-A. Factor loadings (> .40), eigen values, and explained variances are summarized in Table 27.

The three factors were named *social fairness* (four items), *social conformism* (three items), and *outgroup appreciation* (three items). The factor social fairness included items that reflect the perception of justice and equality within society. Items assigned to the factor social conformism represent outgroup conform behaving and opining. The factor outgroup appreciation contained items that reflect affiliation and positive relations with outgroup members.

TABLE 27: Principal component analysis in RDQ-A in study 4.[a]

Item (facet, pole)	Factor		
	1 (Social fairness)	2 (Social conform.)	3 (Outgroup apprec.)
54. No he sido molestado por ser Mapuche. (4, +)	.80		
47. No he sido discriminado. (4, +)	.72		
18. Pienso positivamente sobre los huincas. (7, +)			.75
6. Los huincas han traído tecnologías útiles a Chile. (7, +)		.61	
61. Todos tienen las mismas oportunidades en Chile. (15, +)	.68		
29. Los huincas tienen mejores oportunidades que los Mapuches. (15, -)	-.51		
34. Trabajo más de 8 horas al día. (24, +)			
56. Trabajo menos de 8 horas al día. (24, -)			
3. Me llevo bien con los huincas. (23, +)			.75
33. No me llevo bien con los huincas. (23, -)			-.67
42. Trato de evitar el contacto con Mapuches cada vez que puedo. (20, +)			
60. Me junto con personas Mapuches todos los días. (20, -)	-.47		
22. Cuando escucho el himno nacional de Chile lo canto o tarareo. (29, +)		.84	
37. Nunca canto o tarareo el himno nacional chileno. (29, -)		-.85	
Eigen values	2.20	2.08	1.72
s^2 (%)	15.73	14.88	12.25

Note. [a] Factor loadings, factor labels, eigen values, and explained variances (s^2) of the extracted factors presented.

Three factors were extracted in RDQ-M that explained a total of 36.57% variance. Items not representing these factors were not part of factor interpretation. Factor loadings (> .40), eigen values, and explained variances can be obtained from Table 28.

The three extracted factors were labeled *ingroup disengagement* (four items), *depersonalisation* (two items), and *social isolation* (three items). The factor ingroup disengagement was represented by items reflecting an attitude of ingroup defiance, ingroup detachment, and an individual's sense of inability to fit into either, ingroup or outgroup culture. The factor depersonalisation is composed of items that represent the facet depersonalisation and were correspondingly labeled. The factor social isolation reflects the perception of being part of neither the ingroup nor the outgroup.

TABLE 28: Principal component analysis in RDQ-M in study 4.[a]

Item (facet, pole)	Factor 1 (Ingroup diseng.)	2 (Deper-sonal.)	3 (Social isolat.)
35. No hay racismo en Chile. (2, +)			
17. En Chile no existe discriminación real. (2, +)			
27. No siento apego por el pueblo Mapuche. (6, +)	.66		
19. La cultura Mapuche no es relevante para el mundo de hoy. (6, +)			
30. Ni en la sociedad huinca ni en la sociedad Mapuche me siento como en mi casa. (9, +)			.70
49. He perdido contacto con la cultura Mapuche, pero no soy parte de la cultura huinca. (9, +)			
40. Me siento diferente a todas las demás personas. (10, +)			
4. Me siento dejado de lado por la sociedad. (10, +)			
44. No cumplo con las expectativas ni de la cultura Mapuche ni de la cultura huinca. (11, +)			.68
46. No sé qué es lo que los demás esperan que yo haga. (11, +)			
11. Me siento confundido sobre quién soy. (12, +)		.81	
26. Me siento inseguro sobre quién soy. (12, +)		.82	
16. Las tradiciones Mapuches no tienen mayor valor. (16, +)			
32. La cultura Mapuche merece ser mantenida viva. (16, -)	-.65		
31. Trato de olvidar mis problemas tomando drogas o alcohol. (25, +)			
51. No consumo drogas ni alcohol. (25, -)			
5. No tiene sentido enseñar a los jóvenes Mapuches las tradiciones Mapuches. (32, +)	.56		
41. Es útil trasmitir el conocimiento Mapuche tradicional a los jóvenes Mapuches. (32, -)	-.72		
10. Tiendo a discutir con personas Mapuches. (18, +)			
25. Soy amable con las personas Mapuches. (18, -)			-.46
Eigen values	2.24	1.80	1.79
s^2 [%]	11.20	9.01	8.95

Note. [a] Factor loadings, factor labels, eigen values, and explained variances (s^2) of the extracted factors presented.

Further analyses determined the factor structure of the total RDQ. Items were subsumed into item parcels defined by the facets. The MSA amounted to .78, so data were suitable for the analysis. The screeplot break determined the number of extracted factors.

Prior to rotation, nine factors were extracted from the RDQ [factor 1: eigen value = 6.04, s^2 = 19.47%; factor 2: eigen value = 3.37, s^2 = 10.87%; factor 3: eigen value = 2.62, s^2 = 8.44%; factor 4: eigen value = 1.94, s^2 = 6.25%; factor 5: eigen value = 1.59, s^2 = 5.12%; factor 6: eigen value = 1.28, s^2 = 4.11%; factor 7: eigen value = 1.19, s^2 = 3.84%; factor 8: eigen value = 1.13, s^2 = 3.63%; factor 9: eigen value = 1.02, s^2 = 3.30%]. Figure 15 describes the screeplot course. After a PCA with varimax rotation was applied, six factors were extracted of the total RDQ explaining 54.26% of the variance. Five facets showed low loading on the extracted factors and were, consequently, not part of the factor interpretation. Two facets exhibited parallel structures and were assigned to the factor that allowed the more stringent conceptual interpretation. Table 29 provides the statistical parameters that resulted from the factor analysis. Only factor loadings > .40 are reported.

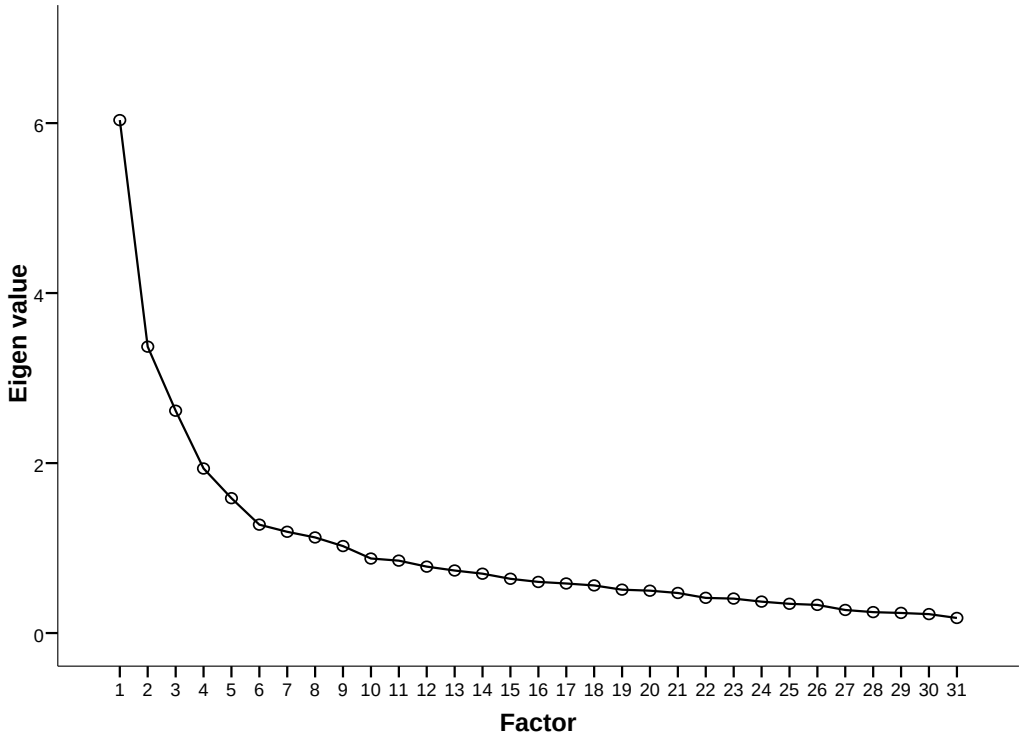


FIGURE 15: Screeplot of RDQ factors prior to rotation in study 4.

As in study 3, a four-factor solution was extracted from the data set and provided the basis for a comparison of the factor structures in the Australian (study 3) and Chilean sample (study 4). The four factors explained 45.03% variance. Two facets exhibited low loadings on all factors and were excluded from factor interpretation. Double structures were detected in four facets, so they were interpreted within the conceptually more appropriate factor. Table 29 summarizes factors, facets, and factor labels of the four-factor solution.

The four factors were labeled *revulsion* (11 facets), *conflict consciousness* (seven facets), *marginalization* (seven facets), and *ingroup rejection* (four facets). The factor revulsion describes the perception of social disadvantage, outgroup resentment and affront, but also detachment from the ingroup. The factor conflict consciousness reflects awareness of personal and group racism as well as assumptions about cultural disruption and social inequality. The factor marginalisation is represented by facets reflecting aspects of social alienation, ingroup detachment, and self-destructive behaviours. The factor ingroup rejection is composed of facets reflecting ingroup defiance and cultural pessimism.

TABLE 29: Principal component analysis of RDQ in study 4.[a]

Facet	Factor			
	1 (Revulsion)	2 (Conflict consciousness)	3 (Marginalization)	4 (Ingroup rejection)
1. Racism consciousness		.79		
2. Racism denial		-.70		
3. Racism vigilance	.51	.45		
4. Racism ignorance		-.59		
5. Pro ingroup				-.45
6. Anti outgroup				.71
7. Pro outgroup	-.63			
8. Anti ingroup	.76			
9. Cultural estrangement			.67	
10. Social isolation	.52			
11. Anomy			.57	
12. Depersonalisation			.47	
13. Permanent damage		.40		
14. Injustice		.74		
15. System justification		-.74		
16. Worthlessness				.73
18. Hostility against ingroup			.50	
19. Hostility against outgroup	.61			
20. Withdrawal from ingroup			.54	
21. Withdrawal from outgroup	.62			
22. Acceptance by outgroup	-.65			
23. Acceptance by ingroup				
24. Self-development			-.45	
25. Destructive escapism			.51	
26. Retreat	.44		-.47	-.47
28. Social activism	.55		-.42	
29. Conformism	-.44			
31. Strengthning ingroup	.56		-.46	
32. Resignation				.72
33. Ethnic pride				
35. Ethnic mistrust	.76			
Eigen values	6.04	3.37	2.62	1.94
s^2 [%]	19.47	10.87	8.44	6.25

Note. [a] Factor loadings, factor labels, eigen values, and explained variances (s^2) of both factor solutions presented.

2.4.2 Criterion validity

Relationships between the four subscales were analyzed analogous to study 3. Correlation coefficients are provided in Table 30.

The identical hypotheses as in study 3 were tested. As predicted, RDQ-T and RDQ-M as well as RDQ-T and RDQ-A showed significant negative correlations. Unexpectedly, RDQ-T and RDQ-R showed a significant positive correlation, while RDQ-T and RDQ-A exhibited significant negative correlations. Zero correlations were confirmed for RDQ-R and RDQ-M as well as RDQ-A and RDQ-M.

TABLE 30: Subscale-intercorrelations in study 4.[a]

	RDQ-R	RDQ-A	RDQ-M
RDQ-T	.476**	-.278**	-.278**
RDQ-R		-.478**	-.027
RDQ-A			.059

Note. [a] Kendall's tau coefficient presented. ** $p < .01$.

2.5 Cross-cultural analyses

The purpose of the following analyses is to compare results from study 3 and study 4. It is, thus, determined whether results from the Australian context were replicated in the Chilean context, and whether cross-cultural validity of the RDQ can be assumed.

2.5.1 Comparative sample characteristics

The samples from study 3 and study 4 underwent a comparative analysis to assess whether the samples exhibited significant differences with regard to the following demographic characteristics derived from the RDQ: Sex, age, literacy, years at school, marital status, employment status, religious affiliation, and spoken language. The category living area was not included, because the response alternatives varied across the two samples.

In a contingency analysis Pearson's X^2 and the Cramer's V value for the categorical variables, Pearson's X^2 and the γ-value for the metric variables were determined. Results indicated that the samples differed significantly with regard to all assessed demographic characteristics except age. Table 31 presents the results from the analysis.

TABLE 31: Contingency analyses over demographic variables in study 3 and study 4.[a]

Variable	X^2 (*df*)	Cramer's *V*	*γ*
Sex	4.11* (1)	.12*	
Literacy	39.77** (1)	.36**	
Marital status	30.57** (6)	.32**	
Employment status	42.19** (6)	.38**	
Religious affiliation	31.27** (4)	.32**	
Spoken language	54.91** (3)	.43**	
Age	69.55 (57)		-.02
Years at school	131.57** (19)		.47**

Note: [a] Pearson's X^2, Cramer's *V*, and *γ* presented. * $p < .05$. ** $p < .01$.

2.5.2 Preliminary analyses

Forty-five items showed similarly shaped distributions in study 3 and study 4, while patterns differed in 17 items. With regard to the response types, the result from study 3, that RDQ-T and RDQ-M were more affected by biased items than RDQ-R and RDQ-A, was replicated in study 4. Generally, more irregularly distributed items were observed in study 4 compared to study 3, particularly in RDQ-R and RDQ-A.

The scatter-plot analysis demonstrated that the Chilean sample provided comparably more consistent responses than the Australian sample: Proportions of 16.25% (Chilean sample) vs. 21.55% (Australian sample) inconsistent responses were reported. The X^2-test confirmed a significant difference between the two samples in the proportion of inconsistent item responses on the total responses [$X^2_{krit(1,\ 95\%)} = 3.84$; $X^2_{emp} = 113.73$].

With regard to the characteristic values, a similar pattern of popularities was apparent in both studies: RDQ-T contained relatively many popular items, while comparably many RDQ-M items showed low popularity in both studies. RDQ-R contained no items of particularly low or high popularity in neither study. Nineteen items were simultaneously reported to show low or high popularity in both studies, while eight items showed a tendency only in one study. Five items simultaneously showed an irregular distribution in both studies, but in study 4 eight items additionally exhibited an irregular distribution.

Homogeneity indices were generally higher in study 4 than in study 3. This concerned the total homogeneity indices of the RDQ subscales, but also most item homogeneity indices. As in study 3, the tendency towards heterogenity was least pronounced in RDQ-R.

There was correspondence between study 3 and study 4 with regard to items that showed low power. Twenty-one items simultaneously exhibited low power in both studies, while 18 items had a

low power in one study, only. Generally, study 4 showed the more preferable power indices compared to study 3.

2.5.3 Comparison of test scores

A two-tailed t-test was applied to determine whether mean scores in the subscales significantly differed in study 3 and study 4. Results indicated that RDQ-T RDQ-R, and RDQ-M exhibited significant differences in the score values, while no significant statistical difference was found for RDQ-A. Effect sizes indicated a mediate effect in RDQ-T and a small effect in RDQ-R and RDQ-M. Table 32 presents the respective statistical data.

TABLE 32: T-test of cross-cultural score differences in RDQ subscales.[a]

Subscale	RDQ-T		RDQ-R		RDQ-A		RDQ-M	
	Study 3	Study 4	Study 3	Study 4	Study 3	Study 4	Study 3	Study 4
M	50.29	46.33	26.07	23.38	26.82	27.71	19.11	17.04
SD	6.21	7.79	8.80	8.28	6.39	7.14	10.76	7.26
t(*df*)	4.73** (301)		2.70** (299)		1.12 (301)		1.97* (293)	
d	.55		.31		.13		.24	

Note. [a] Mean (*M*), standard deviation (*SD*), t-value (*t*), degrees of freedom (*df*), and effect size (*d*) presented.
*p < .05. ** *p* < .01.

Multiple ANCOVAs were conducted to detect whether – in dependence of the cultural background – demographic characteristics had a differential influence on the subscale scores. The subscale score entered into the equation as the dependent variable[78], culture[79] was included as fixed factor, and the multiple demographic variables entered as covariates. The following demographic characteristics (derived from RDQ) were considered: Literacy, sex, years at school[80], maritial status, employment status, religious affiliation, and spoken language. The variable living area was not taken

[78] With regard to the group factor, stanine values were bundled prior to analysis: Values between 1 and 3 were assigned to group 1 representing an accordance below average with the respective response style. Participants with stanine values ranging between 4 and 6 were assigned to group 2 indicative of an average agreement to the response style. If stanine values between 7 and 9 were observed, participants were assigned to group 3 that suggested an above average concordance with the response style.
[79] Two groups were represented: Group 1 = Australian Aboriginal, group 2 = Chilean Mapuche.
[80] Three groups were formed: group 1 = basic education (primary school education: 0 to 8 years), group 2 = mediate education (high school degree: 9 to 12 years), group 3 = superior education (university degree: 13 to 20 years).

into account, as the response alternatives varied across the two samples. It was found that responses to RDQ-T and RDQ-R significantly differed in the two samples with the variable spoken language [RDQ-T: $F(1) = 18.54$, $p < .001$, $\eta^2 = .065$; RDQ-R: $F(1) = 17.88$, $p < .001$, $\eta^2 = .063$]. Scores of RDQ-A were differentially influenced by the variables employment status [$F(1) = 6.53$, $p < .05$, $\eta^2 = .024$] and years at school [$F(1) = 6.34$, $p < .05$, $\eta^2 = .023$], and RDQ-M was differentially influenced by the factor years at school [$F(1) = 4.85$, $p < .005$, $\eta^2 = .018$].

Finally, an item bias analysis was carried out. A two-factorial ANOVA was conducted to detect, in which items score differences significantly differed between the Australian Aboriginal and Chilean Mapuche sample. As first factor, culture was included to the equation that differentiated whether the participant was Aboriginal or Mapuche. The second factor group characterized the participant's score on the subscale the respective item was assigned to (analogous to the prior ANCOVA analysis). The item was defined as the dependent variable. The ANOVA statistics are summarized in Appendix E-6.

Significant effects were expected from the factor group, while the factor culture was predicted to have no effect on the item mean scores. Results indicated that three items did not exhibit the expected significant effects on the group factor. Moreover, 22 items showed a significant effect of the factor culture on the score values.

2.5.4 Reliability

With the exception of Cronbach-α in RDQ-M, all reliability coefficients were higher in the Chilean sample compared to the Australian sample. RDQ-A was specifically weak in study 3, but showed acceptable reliability in study 4.

An F-test was carried out to check whether reliabilities differed significantly in the Australian (study 3) and Chilean sample (study 4). F-values were determined applying the formula:

$$F\,(df_1, df_2) = \frac{1-\alpha_1}{1-\alpha_2} \qquad (5.)$$

with

df_1 = degrees of freedom in numerator (study 3; $n_1 - 1$)

df_2 = degrees of freedom in denominator (study 4; $n_2 - 1$)

α_1 = Cronbach-α reliability in study 3

α_2 = Cronbach-α reliability in study 4.

Significant differences in reliabilities between the two studies were found in RDQ-T [$F(124, 177) = 2.48$, $p < .05$], RDQ-R [$F(124, 177) = 1.54$, $p < .05$], and RDQ-A [$F(124, 177) = 2.18$, $p < .05$], but not in RDQ-M [$F(124, 177) = 1.31$].

2.5.5 Cross-cultural validity

The factorial agreement of the factor solutions derived from study 3 and study 4 was assessed. The procedure involved that the agreement of the factorial loadings of the 31 RDQ facets over the previously determined four factors of the RDQ (i.e., the predefined four-factor solutions of the PCA's over the total RDQ)[81] is calculated. Four indices have been proposed to allow an estimation of the factorial agreement – the identity coefficient, the additivity coefficient, Tucker's coefficient, and the linearity coefficient – that differ in their sensitivity to multiplications and/ or additions of factor loadings. Van de Vijver and Leung (1997) suggested to report all four indices to provide a detailed picture of the factorial similarity. The authors further state that values over .95 are "evidence for factorial similarity" (p. 92), while values below .90 indicate "nonnegligible incongruities" (p. 92). Oppositely, the factor difference – reporting the squared and averaged differences of facet loadings – provides an illustration of the differences of loadings for each facet, in which low values indicate good correspondence.

Table 33 presents the factor differences and the four coefficients assessing factorial agreement. Similarity coefficients lower than .95 were reported from four facets in the additivity coefficient, but remained above the critical value of .90. The low factor difference indices that ranged between .04 and .12 in the facets and between .04 and .09 in the subscales[82] also indicate a good factor correspondence across the two samples.

[81] See chapter 2.4.1 from study 3 and chapter 2.4.1 from study 4.
[82] Factor difference indices of subscales not included in Table 34.

TABLE 33: Factorial agreement after target rotation between study 3 and study 4[a].

Facet	Factor difference	e_{xy}	a_{xy}	p_{xy}	r_{yx}
1	.04	.99	.98	.99	.98
2	.06	.99	.99	.99	.99
3	.07	.98	.97	.98	.97
4	.05	.99	.98	.99	.99
5	.10	.97	.96	.97	.97
6	.07	.98	.97	.98	.98
7	.09	.95	.94	.97	.97
8	.04	.99	1.00	1.00	1.00
9	.05	.98	.98	1.00	1.00
10	.05	.99	.97	.99	.98
11	.12	.96	.95	.96	.97
12	.09	.97	.97	.97	.98
13	.11	.96	.96	.97	.98
14	.04	.99	.99	.99	.99
15	.05	.98	.98	.98	.98
16	.09	.97	.96	.97	.96
18	.05	.97	.91	.97	.98
19	.07	.98	.94	.98	.95
20	.06	.98	.98	.98	.98
21	.10	.97	.96	.97	.97
22	.08	.97	.93	.97	.95
23	.10	.97	.95	.97	.97
24	.06	.96	.96	.98	.99
25	.05	.97	.97	.98	.98
26	.10	.97	.96	.97	.96
28	.06	.98	.97	.98	.97
29	.04	.98	.96	.98	1.00
31	.06	.98	.97	.99	.99
32	.12	.95	.95	.96	.96
33	.09	.97	.96	.97	.96
35	.06	.99	.97	.99	.97

Note: [a] Factor difference and similarity coefficients (e_{xy}: identity coefficient; a_{xy}: additivity coefficient; p_{xy}: Tucker's coefficient; r_{xy}: linearity coefficient) presented.

3. Discussion

3.1 Statistical analyses

Results from study 4 confirmed that the RDQ is applicable in cross-cultural contexts. Similar to study 3, a number of items exhibited ground and ceiling effects, particularly in RDQ-T and RDQ-M, a fact that potentially affected the homogeneity and discriminatory power in some items. Furthermore, some items exhibited irregular distributions that were characterised by an increased amount of responses in the middle category (i.e., *No estoy seguro*). High frequencies of responses to the

middle category may be caused by, first, true indecidedness of the participant on that item; second, the desire of the participant to conceal her/ his true opinion, for example as a reflection of social desirable responding or suspicion against the researcher; and third, incomprehensibility of the item.

Although no definite answer can be provided for each irregular item, it is attempted to shed light on the apparent cases. All items that showed irregular distributions in study 3 also did so in study 4. Observations during the process of data acquisition indicate that items 20 and 45 – generally well understood by the participants – probably present true indecidedness or a social desirability bias. The irregular distributions in items 4, 44, and 46 may, however, indicate incomprehensibility of the item. These items should, consequently, undergo further stages of linguistic adaptation.

It was examined whether the eight items that additionally showed irregular distributions in the Chilean Mapuches reflected a cultural bias resulting from the process of translation and adaptation. However, these precise items did not exhibit a significant cultural bias. Another explanation for the differences in the distribution patterns is that the diverging sampling strategies account for the higher prevalence of irregular items in study 4: The Australian sample predominantly consisted of professionals or illiterate community members, who, consequently, either exhibited an elevated educational status and expertise with inquiries or inquired the principal researcher if the item content remained unclear. In the Chilean sample, the mainly literate community members autonomously responded to the questionnaire, and may in some cases have lacked expertise with scientific inquiries and in others the opportunity to ask clarifying questions to an expert. Consequently, incomprehensibility of the item content or a lesser direct contact with the investigator – and, thus, perhaps to a lesser degree interviewer effects – while filling in the questionnaire may in some cases have accounted for the greater proportion of responses to the middle category and, consequently, of irregular items in the Chilean sample.

Regarding responses to the five-point Likert scale, the Castilian RDQ version prompted responses to categories 1 and 3 (i.e., *En desacuerdo* and *De acuerdo*), while in the English version categories 0 and 4 (i.e., *Wrong* and *Right*) were more frequently selected. This result was potentially due to the linguistically diverging answering formats in the English vs. Castilian RDQ version. Alternatively, it reflected specifics of the two samples: The Australian sample consisted of a large proportion of illiterate participants that generally tended more to extreme answers than literate participants. Moreover, the Mapuche participants were perhaps – due to the present socio-political situation of the Mapuches in Chile – hesitant to disclose their political views that some items may have appeared to inquire.

Two facets – facet 13 (RDQ-T) and 24 (RDQ-A) – appeared to lack relationships within the subscales they were originally assigned to. As in study 3, the exclusion of facet 13 in the reliability analysis increased both coefficients of internal consistency. This finding may indicate that the facet is, in

fact, not a defining characteristic of RDQ-T. In the case of facet 24, operationalizations of the concept self-development have, so far, resulted in strong social desirable responses in all samples and, therefore, remain deficient. The same tendency was apparent in the JHAC12 scale (James, 1996) that specifically assesses John Henryism, so perhaps it is a general problem of the concept to elicit an affirmative bias. Nevertheless, it is suggested that the facet is further tested and, if indicated, revised.

The t-test investigating the significance of mean score differences in the Australian and Chilean sample indicated that the Mapuches scored significantly lower on the RDQ-T and RDQ-R than the Aborigines. This result indicates that ingroup favoritism (represented by the pole convergence on the dimension social group orientation of TRAM) is less pronounced in the Mapuches than in the Aborigines. Alternatively, methodological artefacts may account for this observation: First, the tendency of the Aborigines to give quantitatively more answers in the extreme response categories relative to the Mapuches may have more markedly affected the scores in the subscales RDQ-T and RDQ-R that were more readily affirmed in both samples, than in the subscales RDQ-A and RDQ-M. Second, interviewer effects may have played a role: For example, group membership of the research assistants or the implicit effects of their private attitudes about the topic while instructing the participants may have exerted an influence on the participants' response behavior.

The significant score differences in the two samples with respect to RDQ-T and RDQ-R potentially explain the culturally biased items in these two subscales. Alternatively, diverging distribution patterns of items in the two samples may have caused cultural biases in some items.

Reliability, similar to study 3, was below the expectation in all four subscales of study 4. As a consequence, *hypothesis I* must be rejected for the Chilean sample. The main reason for this deficiency possibly lies in the heterogeneity and deviations of item difficulties within the subscales. Furthermore, significant differences of subscale reliabilities between study 3 and study 4 were detected, so that *hypothesis VI* must be rejected for RDQ-T, RDQ-R, and RDQ-A. The significant differences of the Cronbach-α coefficients in the three subscales may have been caused by a larger raw score variance in the Chilean sample, as was indicated in the item bias analysis or, alternatively, by the different sample sizes.

The factor analysis resulted in a six-factor structure in study 4. Because the postulated four-factor structure was not confirmed, *hypothesis II* must be rejected for the Chilean sample. The predefined four factor solution presented a structure that resembled the four RDQ subscales: The factor conflict consciousness exactly corresponded to the equally labelled factor in study 3, and conceptually reflected some of the defining characteristics of the traditionalist style. The factor revulsion represented the revulsionist style well, and partly corresponded to the factor repulsive solidarity in study 3. The factor ingroup rejection shared some features with the assimilationist style and the factor cultural disengagement in study 3. The factor marginalisation shared a good proportion of defin-

ing facets with the marginalist style. The factorial agreement in the two samples was substantial and confirmed the good cross-cultural validity of the RDQ. *Hypothesis VII* was, therefore, confirmed.

Hypothesis III was partly confirmed in the Chilean sample: A negative relationship of RDQ-R and RDQ-A as well as in RDQ-T and RDQ-M was verified, a result that supports the postulated structural arrangement of the four response styles. Similar to the Australian study, RDQ-T and RDQ-R were positively related, and RDQ-T and RDQ-A were negatively related, which was not predicted. Perhaps this result reflects the tendency that RDQ-T and RDQ-R was more readily affirmed than RDQ-A by the Chilean sample.

The Australian sample contained a significant proportion of traditional people[83], while the Chilean sample mainly consisted of people living in urban environments. The Australian sample, therefore, exhibited stronger traditional tendencies, an observation that was also reflected in the responses to the RDQ: The Australian sample scored significantly higher on RDQ-T than the Chilean sample. This result provides direct evidence of the RDQ's construct validity.

3.2 Sample

The Australian and Chilean samples were not comparable with respect to most of the inquired demographic indicators. Consequently, the comparative analyses must be interpreted with caution. Moreover, comparability of the two studies may have limits that relate to the sampling strategy. First, the procedures of inquiry were different: While the Australian sample received a monetary compensation, the Chilean sample did not. Second, a larger proportion of participants was illiterate in the Australian sample than in the Chilean sample, and so provided their data in an interview. Such differences may have distorted some of the results in the cross-cultural comparisons.

[83] The comparably large total number of Aboriginal people, who reported to live in an urban environment may present an artefact: Many of those people migrated to the cities only recently to receive medical treatment, but were socialized in remote Aboriginal communities.

GENERAL DISCUSSION

The Australian Aboriginal people and the Chilean Mapuches have attracted scientific attention for various centuries now, particularly in the cultural sciences. However, psychological studies have rarely focused on these ethnic groups. Seizing this deficiency, the present study offers an unprecedented account to the comparative psychological study of RED in Australian Aboriginal people and Chilean Mapuche people. Concerning the theoretical frame, the study combines concepts and perspectives from Personality Psychology, Social Psychology, Clinical Psychology, and Cross-cultural Psychology in the conceptualization of the TRAM-model. The present study not only investigates groups with a distinct historical (British vs. Spanish colonisation) and geographical background (Australia vs. South America), but also took regional diversity into account. In Australia, Aboriginal people from South-Eastern as well as Northern and Central Australia were recruited; in Chile, people participated from the urban capital province and the rural ninth province.

Furthermore, the Aboriginal and Chilean samples were very heterogeneous with regard to the age structure of participants: People of all ages – starting from 18 years to the age of 78 – took part in the investigation. The samples were also diverse with regard to the professional background of the participants: The studies involved people from all educational (from illiterate people to academics) and socioeconomic levels (from unemployed people to economic/ political authorities). Furthermore, people with a strong traditional-indigenous socialization from remote communities as well as people living in an urban environment in the second generation have contributed to this investigation.

TRAM incorporates a diverse set of response facets. Moreover, the RDQ as psychometric scale that operationalizes these diverse facets was tested in the English and the Castilian language format. Thus, the investigation profits from conceptual and linguistic diversity. Nevertheless, the RDQ has demonstrated good factorial and criterion validity as well as a high factorial agreement in the Australian and Chilean context. This result provides a strong indication for the cross-cultural applicability of the RDQ, but also for the universality of TRAM.

The current socio-political events in Australia and Chile were, at the time of data acquisition, very difficult. In Australia, the *Northern Territory National Emergency Response Act* in the Northern Territory affected the readiness of people to get involved with the inquiry. While some organisations and agencies were reluctant to cooperate, others were highly motivated and repeatedly inquired the author about the advance of the project. The same tendency was observable in individuals, who were asked spontaneously to participate in the study. It is non-negligible that the tense political situation at the time of the inquiry in Australia is somehow reflected in the responses of the participants to the RDQ.

A similar quandary appeared in the Chilean sample, where at the time of data acquisition recent events of the conflict over territory were still very present in the public discourse. Similar to Australia, institutions involved in indigenous issues are strongly supervised and are, thus, cautious in their interactions with the public – including scientific investigations. Therefore, the sample mainly consisted of community members, and only few professionals and activists were involved. This fact, as well, may have influenced responses of the participating Mapuches to the RDQ.

Despite the difficulties arising from current events in Australia and Chile, many people could be acquired to participate in this investigation to even permit statistical procedures that require larger sample sizes: Only a handful of studies in the field of indigenous research involved comparable sample sizes as that of the present study. Furthermore, the data collection has taken place in a short succession of time, so methodological artefacts due to a long temporal interval until the end of data collection can be ruled out a as potential source of sample variance.

The diversity of this study as concerns the sample and test conception may have evoked particular methodological weaknesses. For example, some of the unexpected results may be due to linguistic artefacts. In a cross-cultural comparison item bias may be a result of an inadequate translation or difficulties to ascertain linguistic equivalence[84]. Specifically, reading comprehension and conceptual understanding may vary significantly in first and second language speakers. In the presented studies, many participants were second language speakers to the English and Castilian formats. The RDQ itself was developed by a second language speaker, even though the process of test development was assisted by researchers, whose mother tongue was English or Castilian. Above that, working as a foreign researcher in a bilingual environment as concerns both – the participants as well as the co-operating project workers – makes one realize the vagueness of language, a perception that is well described by Hanna, Hunt, and Bhopal (2008).

Furthermore, the operationalization of constructs may be worth a further consideration. It could be argued, for example, that the strict strive for economy during test development has overly reduced the conceptual width of the operationalized facets. Unquestionably, this procedure was a necessary compromise that ensured the motivation and accuracy of participants during the inquiry. Nevertheless, the sharp reduction of the total item number to two or three items per facet may raise the question, to which degree the remaining items are representative of their respective facets. The envisaged economy of the test and homogeneity within the final RDQ facets may, in the end, have come at the cost of subscale homogeneity and, consequently, internal consistency.

The low internal consistency of some subscales was a major deficiency of the RDQ in both, study 3 and study 4. Subscale and item heterogeneity were assumed to be responsible for this unfavorable result. It is suggested that another process of item selection precedes future investigations that –

[84] See, for example, Cohn, Cortés, and Alvarez (2009) for Spanish and English probability expressions.

based on results of the correlation analyses and factor analyses – may further improve the internal consistency of the scale. Moreover, it is recommended that later studies are designed to allow a re-test or peer-rating to assess the reliability of the RDQ.

In the Australian case it may be questioned whether an understanding of indigenous people as a homogeneous cultural entity reflects the reality. This point may be illustrated by the fact that there are speakers of approx. 200 Aboriginal languages today (Australian Institute of Aboriginal and Torres Strait Islander Studies and Federation of Aboriginal and Torres Strait Islander Languages, 2005). It is questionable, however, whether a strict separation of cultural groups/ tribes would be a pragmatic strategy for the purposes of this investigation, and whether it would be justifiable. In fact, the reality of the majority of Aboriginal people is rooted in the experiences of the stolen generations or otherwise institutionalized persons, migration to the cities, as well as the winding up of traditional settlements and re-settlement in culturally heterogeneous communities. It is, consequently, unpractical to determine the tribal descent in every person and it is questionable, what significance the knowledge of the tribal descent of a person has if the tribal structures are severely disrupted or a person is disconnected from that tribe. By comparison, it seems to be a secure position to assume that the inter-individual similarity with regard to the living conditions of the Aboriginal people in general exceeds the differences of the living conditions among different tribes. Major differences can be rather expected from people living in urban vs. rural settings and between settlements in the different federal states that often differ significantly in their legislation concerning the indigenous people. The approach to conceptualize the Aboriginal people as a cultural unity for the study of responses to RED, consequently, appears reasonable. In the Mapuche sample, this issue needs not to be addressed, as the Mapuches understand themselves as one cultural group, that is a nation.

A general methodological problem relates to a question that plays a dominant part in the scientific and public debates in Australia as well as Chile: Who is Aboriginal/ Mapuche? The core of the question relates to the distinction of the concepts race and ethnicity to distinguish cultural groups. In Australia and Chile, the race concept has been challenged as nowadays phenotypic characteristics often provide no certain indication of an individual's racial descent. In Australia, this uncertainty finds its reflection in the frequently used derogative references to Aboriginal people as *full-bloods*, *half-casts*, *quadroons*, or *octoroons*, whose application depend on the proportion of Aboriginal ancestry in a person's genetic pool. Aboriginal is, who can proof or is known to have an Aboriginal forefather within a defined period of generational succession[85]. In contrast, the ethnicity criterion of self-identification is usually applied in Chile: A person, who claims to be Mapuche, is officially recognized

[85] The application of the race concept to determine a person's racial descent in Australia appears to be a remnant of the *White Australia Policy*. Proving one's aboriginality has become an issue when in the 1970s the new political agenda reduced the paternalistic structures in favour of granting a certain degree of autonomy to an Aboriginal self-administration. In the course of this process, those, who proved their Aboriginal descent, could profit from governmental programs, for example the *Native Title Act* (Hollinsworth, 1998).

as such. Alternatively, paternal and maternal surnames, or the knowledge of the Mapundungun language are considered to identify a person as Mapuche[86].

In the present investigation, a pragmatic strategy was applied: In most cases, Aboriginal/ Mapuche descent was apparent from defined physical characteristics. If physical characteristics provided no clear indication, the criteria external verification[87] or self-identification were applied. In those Chilean cases, in which recruitment did not take part face-to-face but via Email, the surname criterion was applied. It is acknowledged that none of these approaches are criteria that confirm beyond doubt that a person is Aboriginal or Mapuche. They were, however, considered to be adequate and sufficient criteria for the purpose of conducting a scientific investigation of that kind.

Prospectively, the approach of conceptualizing responses to RED as in the TRAM-model is promising. Future research is encouraged to further investigate the various aspects raised by TRAM: Can the proposed response styles to RED claim universal status? Do the proposed facets that characterize each style exhibit cross-cultural and cross-situational universality? Are there variables that determine a person's response style? How variable is a personal response pattern: Is there, for example, a phasic development through the various styles within a person's life circle? Obviously, TRAM provides a number of interesting and compelling scientific problems that stretch over various fields of the discipline and that are open to diverse conceptual and methodological approaches.

It is envisaged that the RDQ is applied in additional cultural groups and that, for example, a German version of the scale could be applied in ethnic minority groups of German speaking countries. If applied to immigrant populations, however, the applicability of the scale should be previously assessed. Further analyses could then provide more information about the cross-cultural validity of the RDQ and the universality of TRAM. Integrating the factor structure over diverging samples could provide a *world structure* of responses to RED in indigenous and perhaps immigrated minority groups.

The various facets that present different aspects of responses to RED and characterize TRAM have demonstrated their significance also in the empirical context. Results of this study demonstrated that many facets are relevant only to a subgroup within a minority. Like TRAM proposed, the concept of system justification may, for example, be meaningful to individuals with a pronounced tendency towards assimilation. Consequently, the result presented by Jost and Burgess (2000) that individuals with a strong system justification bias exhibit ambivalent attitudes towards their ingroup

[86] The ethnicity criterion was applied in the most recent census in Chile, but is perceived as a weak indicator of cultural descent in some Chilean groups. The surname or knowledge of Mapundungun, however, neither provides a definite criterion.

[87] For example, people who frequent particular institutions or services – like Aboriginal hostels or Aboriginal health centres – have to prove their legitimacy (i.e., aboriginality) to public authorities. Furthermore, certain locations, like Aboriginal communities or unofficial meeting points, are almost exclusively visited by Aboriginal people.

may reflect a response pattern that is characteristic of TRAM's assimilationist style. Likewise, TRAM postulates an abundance of response patterns and relationships between response facets – some aspects were introduced just with the TRAM-model – that provide a valuable basis for future investigations.

As was previously shown, only few attempts have been made to postulate response styles of minority group responses to RED. Yet, the approach shows potential, especially if response patterns are integrated as forms of coping styles into classical stress theories. A number of scientific questions may evolve from the integration of TRAM's response styles into these frameworks. For example, it could be asked whether people with a certain pattern of response styles exhibit preferences in their immediate responses to perceived discrimination as conceptualized by Paradies (2006) and Harrell (1997b). Future investigations may inquire if the response styles predetermine an individual's vulnerability to develop particular psychological and physiological dysfunctions. Alternatively it may be asked whether people exhibiting particular response styles are at lower health risks, and which variables exert a salutogenetic influence.

Similarly, research concerning the well-being in minority group members may well profit from TRAM. Results from study 3 demonstrated that the four postulated response styles exhibit different relationships to life satisfaction[88]. The proposed relationship between perceived discrimination and life satisfaction received further support in this investigation for the Australian Aboriginal people: Generally, those people, who reported higher levels of perceived racism (according to EXP-DM) tended to report lower life satisfaction (according to SWLS), while lower levels of perceived racism were combined with higher estimates of life satisfaction. It could now be asked, what the direction of the relationships between perceived discrimination, the four TRAM response styles, and life satisfaction is. The influences of mediating and moderating variables, as proposed by Clark, Anderson, Clark, and Williams (1999), could then be defined to more detail.

These outlined perspectives into future research illustrate, how the present work can further assist in enhancing our understanding of the effects of RED on minority groups. For those investigations with an interest in minority group responses to RED, the TRAM-model can provide a conceptual basis and the RDQ a diagnostic access to the topic.

[88] According to Diener, Emmons, Larsen, and Griffin, (1985), life satisfaction presents one component of subjective well-being.

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APPENDIX

APPENDIX A-1: Overview of common causes for construct, method, and item bias

(Source: Van de Vijver & Leung, 1997, p. 11).

Type of bias	Source
Construct	· Incomplete overlap of definitions of the construct across cultures · Differential appropriateness of (sub)test content (e.g., skills do not belong to the repertoire of one of the cultural groups) · Poor sampling of all relevant behaviors (e.g., short instruments) · Incomplete coverage of the construct (e.g., not all relevant domains are sampled)
Method	· Differential social desirability · Differential response styles such as extremity scoring and acquiescence · Differential stimulus familiarity · Lack of comparability of samples (e.g., differences in educational background, age, or gender composition) · Differences in physical conditions of administration · Differential familiarity with response procedures · Tester/ interviewer effects · Communication problems between respondent and tester/ interviewer in either cultural group
Item	· Poor item translation · Inadequate item formulation (e.g., complex wording) · Item(s) may invoke additional traits or abilities · Incidental differences in appropriateness of the item content (e.g., topic of item of educational test not in curriculum in one cultural group)

APPENDIX A-2: Guidelines for writing and modifying items in cross-cultural research

(Source: Brislin, 1986).

Guidelines
1. Use short simple sentences of less than sixteen words.
2. Employ the active rather than the passive voice.
3. Repeat nouns instead of using pronouns.
4. Avoid metaphors and colloquialisms.
5. Avoid the subjunctive, for example verb forms with “could”, “would”, “should”.
6. Add sentences to provide context for key ideas. Reword key phrases to provide redundancy.
7. Avoid adverbs and prepositions telling “where” or “when” (e.g., frequently, beyond, upper).
8. Avoid possessive forms where possible.
9. Use specific rather than general terms (e.g., the specific animal such as cows, chickens, or pigs rather than the general term “livestock”).
10. Avoid words indicating vagueness regarding some event or thing (e.g., probably, maybe, perhaps).
11. Use wording familiar to the translators.
12. Avoid sentences with two different verbs, if the verbs suggest two different actions.

APPENDIX B-1 (1): Facets and corresponding items.

Facet	Items
Racism consciousness	98. White people do not treat indigenous people as equals. 77. There is racism against indigenous people in Australia. 2. Australian society is deeply racist against indigenous people.
Racism ignorance	118. Indigenous people are treated as equals by white people. 84. There is no racism in Australia. 30. True discrimination hardly occurs in Australia.
Racism vigilance	109. Because I am indigenous white people treat me badly. 23. I experience racism every day of my life. 19. I expect racism to occur when I am amongst white people. 47. I expect racism to come about whenever a white person is around.
Racism denial	38. I have not been hassled because of my indigenous identity. 80. I have not been discriminated against. 40. I never experienced racism in my life.
Pro ingroup	123. I feel part of my indigenous community. 29. I feel a strong connection to my indigenous ancestors. 93. I have a strong sense of attachment to my indigenous community. 103. Indigenous culture is superior to non-indigenous culture.
Anti ingroup	113. I have negative views about other indigenous people. 55. I reject most indigenous people. 97. I have no sense of attachment to the indigenous community. 42. I consider the traditional indigenous culture to be backward and underdeveloped.
Pro outgroup	76. I feel more like a non-indigenous Australian than like an indigenous Australian. 20. I have positive regard for white people. 51. I feel positive about most white people. 39. Europeans have brought modern technologies to Australia and improved our life-style.
Anti outgroup	92. I have negative views about white people. 17. I feel resentment against white people. 33. I have no regard for the kind of civilization that Europeans have brought to Australia.
Cultural estrangement	104. I am not at home in either the indigenous community or in non-indigenous Australian society. 4. I have lost touch with indigenous culture but have not fully endorsed the non-indigenous culture. 72. I do not feel comfortable with either indigenous or white people.
Social isolation	61. I feel different from all other people. 82. I feel left aside by society. 86. I feel alone in the world.
Anomy	89. I do not meet the demands of either the indigenous or the non-indigenous culture. 8. I do not know what others expect me to do.
Depersonalisation	21. I feel confused about who I really am. 63. I feel uncertain about who I am.
Permanent damage	66. Colonization has changed indigenous cultures for ever. 9. Indigenous cultures and traditions are about to die out. 58. White settlement did not do much damage to indigenous cultures. (-)*
Injustice	107. The history of white Australia is a history of injustice against the indigenous people. 69. White society is not fair towards indigenous people. 96. If you are born as an indigenous person in Australia you never receive fair treatment. 44. Australian society is full of injustices against indigenous people. 12. Indigenous people are treated with fairness in the Australian society. (-)

APPENDIX B-1 (2): Facets and corresponding items.

Facet	Items
System-justification	121. White people had no choice but to colonize the Australian continent. 34. Everyone has the same opportunities to succeed in Australia. 85. Generally, people get what they deserve in this country. 49. If indigenous people do not succeed these days, they only have themselves to blame.
Worthlessness	65. Indigenous people do not have the same opportunities as other Australians. (-) 59. The indigenous culture is too primitive to match up with the modern world. 26. There is nothing about the indigenous culture that is worthy of preservation. 3. There is no value in the old indigenous traditions.
Self-control	68. Indigenous traditions are valuable cultural resources (-). 18. I act in ways that are not considered typical for indigenous people. 108. I conduct myself in ways that hide my indigenous identity.
Hostility - against ingroup	73. I act in ways that are considered typical for indigenous people. (-) 16. I probably do not act respectfully towards other indigenous people.
- against outgroup	1. I can be very rejecting of other indigenous people. 83. I am friendly toward other indigenous people. (-) 106. I tend to argue with white people. 5. I generally show white people my dislike for them.
Withdrawal - from ingroup	112. I am friendly towards white people. (-) 115. I avoid contact with indigenous Australians.
- from outgroup	45. I hardly ever talk to indigenous people. 11. I like to be around other indigenous people. (-) 111. I hardly ever talk to white people. 48. I make an effort to avoid contact with white people whenever I can.
Integration within outgroup	64. I like to be around white people. (-) 15. I get along well with white people. 110. I have no problems being accepted by white people.
Self-development	119. I hardly get along with white people. (-) 46. I put a lot of effort into my education. 14. I work a lot on my personal and professional skills.
Destructive escapism	6. Professional training is not my primary interest. (-) 99. I divert myself by playing computer games or gambling. 120. I try to forget my problems by taking drugs or drinking alcohol.
Retreat	88. I stay away from drugs and alcohol. (-) 52. I practice the traditional indigenous arts. 102. I take part in the indigenous cultural traditions.
Self-sacrification	78. I do not practice indigenous traditions. (-) 22. I would dedicate my life to the indigenous cause. 36. I consider my personal interests less important than the interests of the indigenous people. 54. I commit my life to the interest of the Australian indigenous peoples.
Social activism	100. When I have to make choices in my life I always consider the well-being of my indigenous community. 10. My personal interests come before the interests of my indigenous community. (-) 43. I am politically active and stand up for indigenous peoples' rights. 114. I fight public institutions with racist policies.
Conformism	32. I am not politically active in relation to indigenous affairs. (-) 70. I follow the standards of living of the general Australian society. 25. My major interest is to promote the wealth and well-being of family members and myself. 105. I refuse to live up to the norms of society. (-)

APPENDIX B-1 (3): Facets and corresponding items.

Facet	Items
Obstructionism	71. I do not support social movements that aim to promote indigenous traditions. 87. If I could I would abolish movements that promote the traditional indigenous cultures immediately. 28. I reject social movements that stand up for indigenous cultural traditions. 79. I support social activism for indigenous peoples' rights. (-)
Strengthening ingroup	116. I support the development of indigenous communities. 24. I take part in the social life of my indigenous community. 90. I am not much concerned with community life. (-)
Resignation	117. There is no point in transmitting indigenous traditions to younger community members. 13. It does not make sense to pass on traditional knowledge to younger community members any longer. 56. It is important that indigenous traditions are passed on to younger community members. (-)
Ethnic pride	27. I feel proud about being an indigenous Australian. 57. I am proud to be a member of my indigenous community. 62. My indigenous community has much to be proud of. 101. I do not feel proud about being indigenous. (-)
Ethnic shame	60. I feel embarrassed about most Australian indigenous people. 35. Indigenous people have things to be ashamed of. 67. I am ashamed of my indigenous ancestry. 50. I do not feel ashamed about being indigenous. (-)
Ethnic mistrust	75. I feel I cannot trust white people. 7. I am distrustful of Whites. 91. Suspicion against white people is a protective strategy for indigenous people. 53. I trust white people as much as I trust indigenous people. (-)
Ethnic disdain	37. I have little regard for indigenous people who keep their old traditions. 95. I feel sad about indigenous people who do not take up a modern life style. 31. I feel badly about the backwardness of some indigenous people. 94. Society has good reason to be disdainful of some indigenous people. 81. I have positive regard for indigenous people who keep to their cultural traditions. (-)

Note. "Minus" (-) refers to negative items, numbers represent location on the consecutively numbered RDQ.

APPENDIX B-2: Plain language statement in pretest, study 2, and study 3.

DEAKIN UNIVERSITY HUMAN RESEARCH ETHICS COMMITTEE

PLAIN LANGUAGE STATEMENT

Development of the Responses to Racial And Ethnic Discrimination Questionnaire (RDQ)

Pilot study version

Dear Participant,

The School of Psychology at Deakin University is conducting a study to develop a questionnaire that assesses the psychological responses to racial and ethnic discrimination in indigenous people. It is anticipated that the study will enhance our understanding of how indigenous people experience and react to racism, and we anticipate that these findings will increase awareness about the impacts of racism. The study is being undertaken by Associate Professor David Mellor and Mildred Girndt, a PhD student. In the study we are collecting data from a large sample of indigenous people in Victoria and the Northern Territory, and we would like to invite you to participate in the study.

If you agree to participate in the study, we will be asking you to complete a questionnaire that will include statements related to yourself, other indigenous people and other non-indigenous people. You will be asked to give your opinion as to whether you comply or not with the statements. If you need help, we will read the questions to you. The questionnaire is simple to complete and will take about 35 minutes to accomplish. The kinds of statements include:

I feel a strong connection to
past Aboriginal generations. Wrong - Somewhat wrong - Not sure - Somewhat right - Right

Before filling out the questionnaire you will be asked to sign a consent form, which will be stored separately from the data you provide. The data will be stored in a secure room within the Faculty of Health and Behavioural Science at Deakin University, and will only be accessible to the researchers. To protect your privacy, you will not be asked to record any identifying information on the questionnaire. Should we wish to use the data gathered for any other purpose than that indicated above (eg. for further research), participants will be requested in writing for their consent.

Participation is voluntary, and participants will be free to withdraw at any time and without adverse consequences. Any information gathered up until the time any participant withdraws would then be destroyed. At the completion of the study, you will receive $10 to compensate you for any time and any inconvenience caused by participating in the study, and a summary of the findings will be available if you would like to know what we have found.

While we do not envisage any negative consequences from participation in the study, should you have any concerns, you may contact us by telephone on the numbers given below and we will direct you to an appropriate counselling service in your area. Similarly, if you require further information about the study please feel free to contact us.

Thank you for your interest.

David Mellor, (9244 3742) & Mildred Girndt

Should you have any concerns about the conduct of this research project, please contact the Secretary, Deakin University Human Research Ethics Committee, Research Services, Deakin University, 221 Burwood Highway, Burwood VIC 3125. Tel: (03) 9251 7123 (International +61 3 9251 7123) E-mail: research-ethics@deakin.edu.au
Project no. EC 195-2007

[Researchers' signatures]

APPENDIX B-3: Consent form in pretest, study 2, and study 3.

DEAKIN UNIVERSITY HUMAN RESEARCH ETHICS COMMITTEE

CONSENT FORM

Development of the Responses to Racial And Ethnic Discrimination Questionnaire (RDQ)

I, _____ , agree to take part in the Deakin

University human research project specified above and undertaken by

Associate Professor David Mellor and Mildred Girndt.

I have had the project explained to me, and I have read the Plain Language Statement, which I keep for my records. I understand that agreeing to take part means that I am willing to complete a questionnaire asking me about my experiences and opinions on issues related to being indigenous.

I acknowledge that

1. Upon receipt, my questionnaire will be coded and my name and address kept separately from it.
2. Any information that I provide will not be made public in any form that could reveal my identity to an outside party i.e. that I will remain fully anonymous.
3. Aggregated results will be used for research purposes and may be reported in scientific and academic journals.
4. Individual results **will not** be released to any person except at my request and on my authorisation.
5. I am free to withdraw my consent at any time during the study in which event my participation in the research study will immediately cease and any information obtained from me will not be used.

Signature: Date:

APPENDIX B-4 (1): RDQ, pretest version.

_____
(Code number)

Dear participant,

On the following pages, you will be asked questions about your experiences and opinions on issues that are related to being indigenous. Please read each item carefully, then answer it spontaneously. Because the statements extend over a wide range of possible views you will find some statements highly corresponding with your own views and others less so. This is in fact intended and should not bother you. There are no right or wrong answers to the questions.

Before you start answering the questions, please provide some of your personal details in the box below. These details will be used only for statistical purposes and will not allow your answers to be identified.

Thank you for joining this study!

Age: _____	Gender:	Female O Male O	Years at school: _____		
Maritial status:	Married	O	Employment status:	Employed	O
	Separated	O		Unemployed	O
	Divorced	O		Homemaker	O
	Widowed	O		Student	O
	Single	O		Retired	O
Religious affiliation:	Traditional	O	English proficiency:	Mother tongue	O
	Christian	O		Second language	O
	Other	O			
	None	O			

APPENDIX B-4 (2): RDQ, pretest version.

RDQ

		Wrong	Somewhat wrong	Not sure	Somewhat right	Right	
1.	I can be very rejecting of other indigenous people.						
2.	Australian society is deeply racist against indigenous people.						
3.	There is no value in the old indigenous traditions.						
4.	I have lost touch with indigenous culture but have not fully endorsed the non-indigenous culture.						
5.	I generally show white people my dislike for them.						
6.	Professional training is not my primary interest.						
7.	I am distrustful of Whites.						
8.	I do not know what others expect me to do.						
9.	Indigenous cultures and traditions are about to die out.						
10.	My personal interests come before the interests of my indigenous community.						
11.	I like to be around other indigenous people.						
12.	Indigenous people are treated with fairness in the Australian society.						
13.	It does not make sense to pass on traditional knowledge to younger community members any longer.						
14.	I work a lot on my personal and professional skills.						
15.	I get along well with white people.						
16.	I probably do not act respectfully towards other indigenous people.						
17.	I feel resentment against white people.						
18.	I act in ways that are not considered typical for indigenous people.						
19.	I expect racism to occur when I am amongst white people.						
20.	I have positive regard for white people.						
21.	I feel confused about who I really am.						
22.	I would dedicate my life to the indigenous cause.						
23.	I experience racism every day of my life.						

APPENDIX B-4 (3): RDQ, pretest version.

RDQ

		Wrong	Somewhat wrong	Not sure	Somewhat right	Right
24.	I take part in the social life of my indigenous community.					
25.	My major interest is to promote the wealth and well-being of family members and myself.					
26.	There is nothing about the indigenous culture that is worthy of preservation.					
27.	I feel proud about being an indigenous Australian.					
28.	I reject social movements that stand up for indigenous cultural traditions.					
29.	I feel a strong connection to my indigenous ancestors.					
30.	True discrimination hardly occurs in Australia.					
31.	I feel badly about the backwardness of some indigenous people.					
32.	I am not politically active in relation to indigenous affairs.					
33.	I have no regard for the kind of civilization that Europeans have brought to Australia.					
34.	Everyone has the same opportunities to succeed in Australia.					
35.	Indigenous people have things to be ashamed of.					
36.	I consider my personal interests less important than the interests of the indigenous people.					
37.	I have little regard for indigenous people who keep their old traditions.					
38.	I have not been hassled because of my indigenous identity.					
39.	Europeans have brought modern technologies to Australia and improved our lifestyle.					
40.	I never experienced racism in my life.					
41.	I feel not ashamed about being indigenous.					
42.	I consider the traditional indigenous culture to be backward and underdeveloped.					
43.	I am politically active and stand up for indigenous peoples' rights.					
44.	Australian society is full of injustices against indigenous people.					
45.	I hardly ever talk to indigenous people.					
46.	I put a lot of effort into my education.					

3

RDQ

		Wrong	Somewhat wrong	Not sure	Somewhat right	Right	
47.	I expect racism to come about whenever a white person is around.						
48.	I make an effort to avoid contact with white people whenever I can.						
49.	If indigenous people do not succeed these days, they only have themselves to blame.						
50.	I feel positive about most white people.						
51.	I practice the traditional indigenous arts.						
52.	I trust white people as much as I trust indigenous people.						
53.	I commit my life to the interest of the Australian indigenous peoples.						
54.	I reject most indigenous people.						
55.	It is important that indigenous traditions are passed on to younger community members.						
56.	I am proud to be a member of my indigenous community.						
57.	White settlement did not do much damage to indigenous cultures.						
58.	The indigenous culture is too primitive to match up with the modern world.						
59.	I feel embarrassed about most Australian indigenous people.						
60.	White people had no choice but to colonize the Australian continent.						
61.	I feel different from all other people.						
62.	My indigenous community has much to be proud of.						
63.	I feel uncertain about who I am.						
64.	I like to be around white people.						
65.	Indigenous people do not have the same opportunities as other Australians.						
66.	Colonization has changed indigenous cultures for ever.						
67.	I am ashamed of my indigenous ancestry.						
68.	Indigenous traditions are valuable cultural resources.						
69.	White society is not fair towards indigenous people.						

APPENDIX B-4 (5): RDQ, pretest version.

RDQ

		Wrong	Somewhat wrong	Not sure	Somewhat right	Right	
70.	I follow the standards of living of the general Australian society.						
71.	I do not support social movements that aim to promote indigenous traditions.						
72.	I do not feel comfortable with either indigenous or white people.						
73.	I act in ways that are considered typical for indigenous people.						
74.	I feel I cannot trust white people.						
75.	I feel more like a non-indigenous Australian than like an indigenous Australian.						
76.	There is racism against indigenous people in Australia.						
77.	I do not practice indigenous traditions.						
78.	I support social activism for indigenous peoples' rights.						
79.	I have not been discriminated against.						
80.	I try to forget my problems by taking drugs or drinking alcohol.						
81.	I have positive regard for indigenous people who keep to their cultural traditions.						
82.	I feel left aside by society.						
83.	I am friendly toward other indigenous people.						
84.	There is no racism in Australia.						
85.	Generally, people get what they deserve in this country.						
86.	I feel alone in the world.						
87.	If I could I would abolish movements that promote the traditional indigenous cultures immediately.						
88.	I stay away from drugs and alcohol.						
89.	I do not meet the demands of either the indigenous or the non-indigenous culture.						
90.	I am not much concerned with community life.						
91.	Suspicion against white people is a protective strategy for indigenous people.						
92.	I have negative views about white people.						

RDQ

	Wrong	Somewhat wrong	Not sure	Somewhat right	Right
93. I have a strong sense of attachment to my indigenous community.					
94. Society has good reason to be disdainful of some indigenous people.					
95. I feel sad about indigenous people who do not take up a modern life style.					
96. If you are born as an indigenous person in Australia you never receive fair treatment.					
97. I have no sense of attachment to the indigenous community.					
98. White people do not treat indigenous people as equals.					
99. I divert myself by playing computer games or gambling.					
100. When I have to make choices in my life I always consider the well-being of my indigenous community.					
101. I do not feel proud about being indigenous.					
102. I take part in the indigenous cultural traditions.					
103. Indigenous culture is superior to non-indigenous culture.					
104. I am not at home in either the indigenous community or in non-indigenous Australian society.					
105. I refuse to live up to the norms of society.					
106. I tend to argue with white people.					
107. The history of white Australia is a history of injustice against the indigenous people.					
108. I conduct myself in ways that hide my indigenous identity.					
109. Because I am indigenous white people treat me badly.					
110. I have no problems being accepted by white people.					
111. I hardly ever talk to white people.					
112. I am friendly towards white people.					
113. I have negative views about other indigenous people.					
114. I fight public institutions with racist policies.					
115. I avoid contact with indigenous Australians.					

APPENDIX B-4 (7): RDQ, pretest version.

RDQ

	Wrong	Somewhat wrong	Not sure	Somewhat right	Right
116. I support the development of indigenous communities.					
117. There is no point in transmitting indigenous traditions to younger community members.					
118. Indigenous people are treated as equals by white people.					
119. I hardly get along with white people.					
120. I feel part of my indigenous community.					

Thank you!

7

APPENDIX B-5: Documentation sheet in pretest.

_____
(Code nº)

Documentation sheet

Development of the Responses to Racial And Ethnic Discrimination Questionnaire (RDQ)
Pretest

a) *Single items*

Question is -	Question nº	Comment
- hard to understand / too complicated		
- ambiguous in meaning		
- intimidating		
- strange / not applicable to context		

b) *Questionnaire general*

- Questionnaire is too long ☐
- Questionnaire appears insiduous / to have a hidden intention ☐
- Questions are upsetting ☐
- Questions reflect well my opinion ☐
- Questionnaire can be applied without problems ☐
- Any other comments (e.g. difficulties the participant encountered, important issues that are missing)

_____

_____

APPENDIX B-6: Response frequencies (*N*) to statements of documentation sheet and item treatment after pretest.

Item	Frequency of response to the statement "Question is ..."				Treatment
	Hard to understand / too complicated	Ambiguous in meaning	Intimidating	Strange/ not applicable to context	
8			1		Acceptance
17	1			1	Revision
19				1	Revision
20				1	Revision
22	1	1			Acceptance
25	1				Revision
26	1				Revision
32		1			Revision
33			1		Revision
35		1			Exclusion
36	1				Exclusion
43	1				Revision
58	1				Revision
76	1				Acceptance
77	1				Acceptance
86		1			Acceptance
88		1			Acceptance
90	1				Revision
93	1				Revision
94	1				Exclusion
99		1			Acceptance
101	1				Acceptance
107	1				Revision
113	1				Revision
117		1			Revision
120		1			Acceptance

APPENDIX B-7: Item revisions after Step 1 of pretest. Original item formulations, revised item formulations, and types of modifications.

Item	Original item formulation	Revised item formulation	Type of modification
7	I feel resentment against white people.	I feel angry toward white people.	· Simplification of wording
19	I expect racism to occur when I am amongst white people.	I expect to experience racism when I am amongst white people.	· Simplification of grammatical structure
20	I have positive regard for white people.	I think about white people positively.	· Simplification of grammatical structure
25	My major interest is to promote the wealth and well-being of family members and myself.	The most important thing for me is to promote the well-being of family members and myself.	· Simplification of grammatical structure
26	There is nothing about the indigenous culture that is worthy of preservation.	There is nothing about the indigenous culture that is worth being kept alive.	· Simplification of wording
32	I am not politically active in relation to indigenous affairs.	I am not politically active in indigenous affairs.	· Deletion of words
33	I have no regard for the kind of civilization that Europeans have brought to Australia.	I see no good in the things that white people have brought to Australia.	· Simplification of grammatical structure · Simplification of wording
43	I am politically active and stand up for indigenous peoples' rights.	I stand up for indigenous people's rights.	· Simplification of grammatical structure · Deletion of words
58	The indigenous culture is too primitive to match up with the modern world.	The indigenous culture is too simple to fit into today's world.	· Simplification of grammatical structure · Simplification of wording
90	I am not much concerned with community life.	I am not involved in indigenous community life.	· Deletion of words · Simplification of wording
93	I have a strong sense of attachment to my indigenous community.	I feel a strong attachment to my indigenous community.	· Deletion of words · Simplification of wording
107	The history of white Australia is a history of injustice against the indigenous people.	Throughout history white people have treated indigenous people unfairly.	· Simplification of wording
113	I have negative views about other indigenous people.	I have negative feelings about other indigenous people.	· Simplification of wording
117	There is no point in transmitting indigenous traditions to younger community members.	There is no point in teaching indigenous traditions to younger indigenous people.	· Simplification of grammatical structure · Simplification of wording

APPENDIX B-8: Item revisions after Step 2 of pretest (1). Original item formulations, revised item formulations, and types of modifications.

Item	Original item formulation	Revised item formulation	Type of modification
1	I can be very rejecting of other indigenous people.	I keep indigenous people at a distance.	· Simplification of wording
2	Australian society is deeply racist against indigenous people.	Australian society is racist against indigenous people.	· Deletion of words
4	I have lost touch with indigenous culture but have not fully endorsed the non-indigenous culture.	I have lost touch with indigenous culture but I am not part of the Western culture.	· Simplification of wording
5	I generally show white people my dislike for them.	I show white people that I do not like them.	· Simplification of wording · Deletion of words
6	Professional training is not my primary interest.	Further education is not important to me.	· Simplification of wording
7	I am distrustful of Whites.	I do not trust white people.	· Simplification of wording
9	Indigenous cultures and traditions are about to die out.	Indigenous cultures and traditions are on the brink of dying out.	· Simplification of wording
12	Indigenous people are treated with fairness in the Australian society.	Indigenous people are treated fairly in the Australian society.	· Simplification of grammatical structure · Simplification of wording
13	It does not make sense to pass on traditional knowledge to younger community members any longer.	These days it does not make sense to pass on traditional knowledge to younger indigenous people.	· Simplification of grammatical structure · Simplification of wording
14	I work a lot on my personal and professional skills.	I try hard to develop my personal and work skills.	· Simplification of wording
16	I probably do not act respectfully towards other indigenous people.	I do not act respectfully towards other indigenous people.	· Deletion of words
18	I act in ways that are not considered typical for indigenous people.	I am not a typical indigenous person.	· Simplification of grammatical structure · Simplification of wording
21	I feel confused about who I really am.	I feel confused about who I am.	· Deletion of words
28	I reject social movements that stand up for indigenous cultural traditions.	I am against social movements that stand up for indigenous cultural traditions.	· Simplification of wording
30	True discrimination hardly occurs in Australia.	Real discrimination does not exist in Australia.	· Simplification of wording
34	Everyone has the same opportunities to succeed in Australia.	Everyone has the same chances in Australia.	· Simplification of wording
37	I have little regard for indigenous people who keep their old traditions.	I have no respect for indigenous people who keep their old traditions.	· Simplification of wording
38	I have not been hassled because of my indigenous identity.	I have not been hassled for being indigenous.	· Simplification of wording
39	Europeans have brought modern technologies to Australia and improved our lifestyle.	White people have brought useful technologies to Australia.	· Simplification of grammatical structure · Simplification of wording
42	I consider the traditional indigenous culture to be backward and underdeveloped.	I feel more like a white Australian than like an indigenous Australian.	· Reformulation
44	Australian society is full of injustices against indigenous people.	Australian society is not fair to indigenous people.	· Simplification of wording
45	I hardly ever talk to indigenous people.	I never talk to indigenous people.	· Simplification of wording

APPENDIX B-8: Item revisions after Step 2 of pretest (2). Original item formulations, revised item formulations, and types of modifications.

Item	Original item formulation	Revised item formulation	Type of modification
48	I make an effort to avoid contact with white people whenever I can.	I try to avoid contact with white people whenever I can.	· Simplification of wording
49	If indigenous people do not succeed these days, they only have themselves to blame.	If indigenous people are not successful today they only have themselves to blame.	· Simplification of grammatical structure · Simplification of wording
50	I feel positive about most white people.	I feel positive about white people.	· Deletion of words
53	I commit my life to the interest of the Australian indigenous peoples.	I have committed my life to the well-being of indigenous people.	· Simplification of grammatical structure · Simplification of wording
54	I reject most indigenous people.	I do not like indigenous people.	· Simplification of wording · Deletion of words
55	It is important that indigenous traditions are passed on to younger community members.	It is important that indigenous traditions are passed on to the next generation.	· Simplification of wording
56	I am proud to be a member of my indigenous community.	I am proud to be part of my indigenous community.	· Simplification of wording
59	I feel embarrassed about most Australian indigenous people.	I feel ashamed about indigenous people`s behaviour.	· Reformulation · Simplification of wording
60	White people had no choice but to colonize the Australian continent.	White people needed to colonize the Australian continent.	· Simplification of wording
65	Indigenous people do not have the same opportunities as other Australians.	Indigenous people do not have the same chances as other Australians.	· Simplification of wording
66	Colonization has changed indigenous cultures for ever.	Colonization has changed indigenous cultures forever.	· Simplification of grammatical structure
68	Indigenous traditions are valuable cultural resources.	Indigenous traditions are valuable.	· Simplification of grammatical structure · Simplification of wording
70	I follow the standards of living of the general Australian society.	I live and act as people in Australia are expected to.	· Reformulation · Simplification of wording
72	I do not feel comfortable with either indigenous or white people.	I do not feel comfortable around indigenous people or around white people.	· Simplification of grammatical structure
73	I act in ways that are considered typical for indigenous people.	I act typical for an indigenous person.	· Deletion of words
74	I feel I cannot trust white people.	I cannot trust white people.	· Deletion of words
75	I feel more like a non-indigenous Australian than like an indigenous Australian.	I feel more like a white Australian than like an indigenous Australian.	· Simplification of wording
78	I support social activism for indigenous peoples' rights.	I support campaigns for indigenous people's rights.	· Simplification of wording
81	I have positive regard for indigenous people who keep to their cultural traditions.	I respect indigenous people who keep their cultural traditions.	· Simplification of wording · Deletion of words
82	I feel left aside by society.	I feel left out by society.	· Simplification of wording
85	Generally, people get what they deserve in this country.	People get what they deserve in this country.	· Deletion of words
87	If I could I would abolish movements that promote the traditional indigenous cultures immediately.	I would get rid of anything that promotes the traditional indigenous cultures.	· Simplification of wording · Deletion of words

APPENDIX B-8: Item revisions after Step 2 of pretest (3). Original item formulations, the revised item formulations, and types of modifications.

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Item	Original item formulation	Revised item formulation	Type of modification
89	I do not meet the demands of either the indigenous or the non-indigenous culture.	I do not meet the expectations of either the indigenous or the white culture.	· Simplification of wording
91	Suspicion against white people is a protective strategy for indigenous people.	Indigenous people need to be suspicious of white people.	· Reformulation
95	I feel sad about indigenous people who do not take up a modern life style.	I feel sad about indigenous people who do not take up a Western life-style.	· Simplification of wording
97	I have no sense of attachment to the indigenous community.	I feel no attachment to the indigenous community.	· Simplification of wording · Deletion of words
100	When I have to make choices in my life I always consider the well-being of my indigenous community.	Whatever I do I always consider the well-being of my indigenous community.	· Simplification of grammatical structure · Simplification of wording
103	Indigenous culture is superior to non-indigenous culture.	Indigenous culture is better than white culture.	· Simplification of wording
104	I am not at home in either the indigenous community or in non-indigenous Australian society.	I am at home in neither the indigenous community nor white society.	· Simplification of grammatical structure · Simplification of wording
105	I refuse to live up to the norms of society.	I choose not to live in the same way as most other people in Australia.	· Simplification of wording
108	I conduct myself in ways that hide my indigenous identity.	I try to hide my indigenous identity.	· Simplification of wording · Deletion of words
110	I have no problems being accepted by white people.	White people accept me easily.	· Reformulation
111	I hardly ever talk to white people.	I never talk to white people.	· Simplification of wording · Deletion of words
114	I fight public institutions with racist policies.	I fight organizations or businesses that are racist.	· Simplification of wording
115	I avoid contact with indigenous Australians.	I avoid contact with indigenous people.	· Simplification of wording
119	I hardly get along with white people.	I do not get along with white people.	· Simplification of wording

APPENDIX B-9: Itemarrangement to facets in pretest and studies 2-4.

Response category	Facet	Pretest	Study 2	Study 3/ study 4
Racism awareness	Racism consciousness	98, 77, 2	14, 80, 98	2, 59
	Racism ignorance	118, 84, 30	4, 110, 54	35, 17
	Racism vigilance	109. 23, 19, 47	36, 63, 116, 25	24, 43
	Racism denial	38, 80, 40	101, 72, 41	54, 47
Group regard	Pro ingroup	123, 29, 93, 103	6, 59, 1, 103	63, 1
	Anti ingroup	113, 55, 97, 42	85, 48, 21, 29	27, 19
	Pro outgroup	76, 20, 51, 39	90, 108, 45, 10	18, 6
	Anti outgroup	92, 17, 33	93, 16, 56	48, 7
Alienation	Cultural estrangement	104, 4, 72	5, 96, 77	30, 49
	Social isolation	61, 82, 86	100, 74, 31	40, 4
	Anomy	89, 8	104, 88	44, 46
	Depersonalisation	21, 63	38, 66	11, 26
Group-related assumptions	Permanent damage	66, 9, 58	111, 82, 112	8, 36, 58
	Injustice	107, 69, 96, 44, 12	33, 8, 69, 106	50, 9
	System-justification	121, 34, 85, 49, 65	27, 95, 50, 19, 11	61, 29
	Worthlessness	59, 26, 3, 68	34, 43, 17, 114	16, 32
Group-directed behavior	Self-control	18, 108, 73	105, 57, 83	-
	Hostility			
	- Against ingroup	16, 1, 83	39, 86, 97	10, 25
	- Against outgroup	106, 5, 112	22, 13, 75	53, 55
	Withdrawal			
	- From ingroup	115, 45, 11	79, 94, 3	42, 60
	- From outgroup	111, 48, 64	61, 70, 65	15, 28
	Integration			
	- Within ingroup	-	-	23, 57
	- Within outgroup	15, 110, 119	18, 35, 89	3, 33
Self-directed behavior	Self-development	46, 14, 6	76, 9, 44	34, 56
	Destructive escapism	99, 120, 88	20, 30, 84	31, 51
	Retreat	52, 102, 78	7, 107, 78	13, 39
	Self-sacrification	22, 36, 54, 100, 10	42, 15, 109, 52	-
System-directed behavior	Social activism	43, 114, 32	2, 60, 28	12, 38
	Conformism	70, 25, 105	58, 73, 37	22, 37
	Obstructionism	71, 87, 28, 79	64, 24, 87	-
	Strengthening ingroup	116, 24, 90	99, 47, 40	14, 52
	Resignation	117, 13, 56	12, 81, 62	5, 41
Emotion	Ethnic pride	27, 57, 62, 101	53, 71, 23, 102	62, 21
	Ethnic shame	60, 35, 67, 50	55, 32, 113	-
	Ethnic mistrust	75, 7, 91, 53	67, 51, 26, 68	20, 45
	Ethnic disdain	37, 95, 31, 94, 81	49, 46, 91	-

_____
(Code number)

Dear participant,

On the following pages, you will be asked questions about your experiences and opinions on issues that are related to being indigenous. Please read each item carefully, then answer it spontaneously. Because the statements extend over a wide range of possible views you will find some statements highly corresponding with your own views and others less so. This is in fact intended and should not bother you. There are no right or wrong answers to the questions.

Before you start answering the questions, please provide some of your personal details in the box below. These details will be used only for statistical purposes and will not allow your answers to be identified.

Thank you for joining this study!

Age: _____	Gender:	Female O Male O	Highest level of education: _____		
Marital status:	Single	O	Employment status:	Employed	O
	De facto	O		Unemployed	O
	Married	O		Pension	O
	Separated	O		Homemaker	O
	Divorced	O		Student	O
	Widowed	O		Retired	O
	Other	O		Other	O
Religious affiliation:	Traditional	O	English proficiency:	First language	O
	Christian	O		Second language	O
	Other	O			
	None	O			

APPENDIX C-1 (2): RDQ, study 2 version.

RDQ

		Wrong	Somewhat wrong	Not sure	Somewhat right	Right	
1.	I feel a strong attachment to my indigenous community.						
2.	I stand up for indigenous people's rights.						
3.	I like to be around other indigenous people.						
4.	Indigenous people are treated as equals by white people.						
5.	I am at home in neither the indigenous community nor white society.						
6.	I feel part of my indigenous community.						
7.	I practice the traditional indigenous arts.						
8.	If you are born as an indigenous person in Australia you never receive fair treatment.						
9.	I try hard to develop my personal and work skills.						
10.	White people have brought useful technologies to Australia.						
11.	Indigenous people do not have the same chances as other Australians.						
12.	There is no point in teaching indigenous traditions to younger indigenous people.						
13.	I show white people that I do not like them.						
14.	White people do not treat indigenous people as equals.						
15.	I have committed my life to the well-being of indigenous people.						
16.	I feel angry toward white people.						
17.	There is no value in the old indigenous traditions.						
18.	I get along well with white people.						
19.	If indigenous people are not successful today they only have themselves to blame.						
20.	I divert myself by playing computer games or gambling.						
21.	I feel no attachment to the indigenous community.						
22.	I tend to argue with white people.						
23.	My indigenous community has much to be proud of.						

2

RDQ

		Wrong	Somewhat wrong	Not sure	Somewhat right	Right	
24.	I am against social movements that stand up for indigenous cultural traditions.						
25.	I expect racism to come about whenever a white person is around.						
26.	Indigenous people need to be suspicious of white people.						
27.	White people needed to colonize the Australian continent.						
28.	I am not politically active in indigenous affairs.						
29.	The traditional indigenous culture is not relevant to today's world.						
30.	I try to forget my problems by taking drugs or drinking alcohol.						
31.	I feel alone in the world.						
32.	I am ashamed of my indigenous ancestry.						
33.	Throughout history white people have treated indigenous people unfairly.						
34.	The indigenous culture is too simple to fit into today's world.						
35.	White people accept me easily.						
36.	Because I am indigenous white people treat me badly.						
37.	I choose not to live in the same way as most other people in Australia.						
38.	I feel confused about who I am.						
39.	I do not act respectfully towards other indigenous people.						
40.	I am not involved in indigenous community life.						
41.	I never experienced racism in my life.						
42.	I would dedicate my life to the indigenous cause.						
43.	There is nothing about the indigenous culture that is worth being kept alive.						
44.	Further education is not important to me.						
45.	I feel positive about white people.						
46.	I feel sad about indigenous people who do not take up a Western lifestyle.						

RDQ

		Wrong	Somewhat wrong	Not sure	Somewhat right	Right
47.	I take part in the social life of my indigenous community.					
48.	I do not like indigenous people.					
49.	I have no respect for indigenous people who keep their old traditions.					
50.	People get what they deserve in this country.					
51.	I do not trust white people.					
52.	My personal interests come before the interests of my indigenous community.					
53.	I feel proud about being an indigenous Australian.					
54.	Real discrimination does not exist in Australia.					
55.	I feel ashamed about indigenous people's behaviour.					
56.	I see no good in the things that white people have brought to Australia.					
116.	I expect to experience racism when I am amongst white people.					
57.	I try to hide my indigenous identity.					
58.	I live and act as people in Australia are expected to.					
59.	I feel a strong connection to my indigenous ancestors.					
60.	I fight organizations or businesses that are racist.					
61.	I never talk to white people.					
62.	It is important that indigenous traditions are passed on to the next generation.					
63.	I experience racism every day of my life.					
64.	I would get rid of anything that promotes the traditional indigenous cultures.					
65.	I like to be around white people.					
66.	I feel uncertain about who I am.					
67.	I cannot trust white people.					
68.	I trust white people as much as I trust indigenous people.					

RDQ

		Wrong	Somewhat wrong	Not sure	Somewhat right	Right
69.	Australian society is not fair to indigenous people.					
70.	I try to avoid contact with white people whenever I can.					
71.	I am proud to be part of my indigenous community.					
72.	I have not been discriminated against.					
73.	The most important thing for me is to promote the well-being of family members and myself.					
74.	I feel left out by society.					
75.	I am friendly towards white people.					
76.	I put a lot of effort into my education.					
77.	I do not feel comfortable around indigenous people or around white people.					
78.	I do not practice indigenous traditions.					
79.	I avoid contact with indigenous people.					
80.	There is racism against indigenous people in Australia.					
81.	These days it does not make sense to pass on traditional knowledge to younger indigenous people.					
82.	Indigenous cultures and traditions are on the brink of dying out.					
83.	I act typical for an indigenous person.					
84.	I stay away from drugs and alcohol.					
85.	I have negative feelings about other indigenous people.					
86.	I keep indigenous people at a distance.					
87.	I support campaigns for indigenous people's rights.					
88.	I do not know what others expect me to do.					
89.	I do not get along with white people.					
90.	I feel more like a white Australian than like an indigenous Australian.					
91.	I respect indigenous people who keep their cultural traditions.					

APPENDIX C-1 (6): RDQ, study 2 version.

RDQ

	Wrong	Somewhat wrong	Not sure	Somewhat right	Right
93. I have negative views about white people.					
94. I never talk to indigenous people.					
95. Everyone has the same chances in Australia.					
96. I have lost touch with indigenous culture but I am not part of Western culture.					
97. I am friendly towards other indigenous people.					
98. Australian society is racist against indigenous people.					
99. I support the development of indigenous communities.					
100. I feel different from all other people.					
101. I have not been hassled for being indigenous.					
102. I do not feel proud about being indigenous.					
103. Indigenous culture is better than white culture.					
104. I do not meet the expectations of either the indigenous or the white culture.					
105. I am not a typical indigenous person.					
106. Indigenous people are treated fairly in the Australian society.					
107. I take part in the indigenous cultural traditions.					
108. I think about white people positively.					
109. Whatever I do I always consider the well-being of my indigenous community.					
110. There is no racism in Australia.					
111. Colonization has changed indigenous cultures forever.					
112. White settlement did not do much damage to indigenous cultures.					
113. I do not feel ashamed about being indigenous.					
114. Indigenous traditions are valuable.					

6

APPENDIX C-2: Item revisions after study 2 (1). Item formulations, revised item formulations, and types of modifications.

Item	Item formulation after pretest	Item formulation after study 2	Type of modification
1	I feel a strong attachment to my indigenous community.	I feel a strong attachment to the Aboriginal community.	· Generalization of meaning
2	I stand up for indigenous people's rights.	I am a member of an Aboriginal rights organization.	· Major adaptation[1]
3	I like to be around other indigenous people.	I mingle with Aboriginal people every day.	· Generalization of meaning
6	I feel part of my indigenous community.	I feel part of the Aboriginal community.	· Generalization of meaning
11	Indigenous people do not have the same chances as other Australians.	White people have better opportunities than Aboriginal people.	· Major adaptation[1]
12	There is no point in teaching indigenous traditions to younger indigenous people.	There is no point in teaching Aboriginal traditions to young Aboriginals.	· Simplification of structure · Reduction of ambiguity in meaning
17	There is no value in the old indigenous traditions.	There is no value in Aboriginal traditions.	· Simplification of wording and structure
28	I am not politically active in indigenous affairs.	I am not a member of any Aboriginal rights organization.	· Major adaptation[1]
29	The traditional indigenous culture is not relevant to today's world.	Aboriginal culture is not relevant to today's world.	· Simplification of wording and structure
37	I choose not to live in the same way as most other people in Australia.	I never sing or hum along to the Australian national anthem.	· Major adaptation[1]
39	I do not act respectfully towards other indigenous people.	I tend to argue with Aboriginal people.	· Major adaptation[1]
40	I am not involved in indigenous community life.	I have no contact with Aboriginal communities.	· Reduction of ambiguity in meaning
44	Further education is not important to me.	I work less than 8 hours a day.	· Reduction of social desirability tendencies
53	I feel proud about being an indigenous Australian.	I am proud to be Aboriginal.	· Simplification of wording and structure
58	I live and act as people in Australia are expected to.	When I hear the Australian national anthem I sing or hum along.	· Major adaptation[1]
62	It is important that indigenous traditions are passed on to the next generation.	It is useful to pass on traditional Aboriginal knowledge to young Aboriginals.	· Increase item ability to polarize · Enhancement of subscale homogeneity
65	I like to be around white people.	I mingle with white people every day.	· Increase proximity to concept
68	I trust white people as much as I trust indigenous people.	I trust white people.	· Enhancement of subscale homogeneity
75	I am friendly towards white people.	I am kind to white people.	· Major adaptation[1]
76	I put a lot of effort into my education.	I work more than 8 hours a day.	· Reduction of social desirability tendencies

APPENDIX C-2: Item revisions after study 2 (2). Item formulations, revised item formulations, and types of modifications.

Item	Item formulation after pretest	Item formulation after study 2	Type of modification
79	I avoid contact with indigenous people.	I try to avoid contact with Aboriginal people whenever I can.	· Major adaptation[1]
84	I stay away from drugs and alcohol.	I do not consume drugs or alcohol.	· Neutralization of expression
95	Everyone has the same chances in Australia.	Everyone has the same opportunities in Australia.	· Enhancement of subscale homogeneity
97	I am friendly towards other indigenous people.	I am kind to Aboriginal people.	· Major adaptation[1]
99	I support the development of indigenous communities.	I take important responsibilities in the Aboriginal community.	· Increase item ability to polarize
102	I do not feel proud about being indigenous.	I am not proud to be Aboriginal.	· Simplification of wording and structure
112	White settlement did not do much damage to indigenous cultures.	White people did not affect Aboriginal cultures.	· Simplification of grammatical structure · Increase item ability to polarize
114	Indigenous traditions are valuable.	Aboriginal cultures are worth to be kept alive.	· Increase proximity to concept

APPENDIX C-3: Item statistics after study 2. Mean [*M*], median [*MD*], standard deviation [*SD*], kurtosis, skewness, popularity [p_{it}], and power [r_{it}].

Facet	Item	*M*	*MD*	*SD*	Skew-ness	Kurt-osis	p_{it}	r_{it}
1	14	2,72	3	1,44	-0,89	-0,58	0,68	.102
	80	3,25	4	1,37	-1,71	1,42	0,81	.263
	98	2,89	3	1,38	-1,10	-0,07	0,72	.164
2	4	1,36	1	1,54	0,70	-1,09	0,34	.477
	110	0,85	0	1,32	1,37	0,58	0,21	.405
	54	0,85	0	1,33	1,43	0,76	0,21	.430
3	36	2,09	2	1,56	-0,09	-1,53	0,52	.502
	63	2,41	3	1,56	-0,39	-1,41	0,6	.594
	116	2,46	3	1,57	-0,50	-1,33	0,62	.559
	25	1,87	2	1,59	0,07	-1,58	0,47	.569
4	101	1,60	1	1,70	0,39	-1,59	0,4	.432
	72	1,26	0	1,58	0,80	-1,00	0,32	.542
	41	1,13	0	1,61	0,95	-0,83	0,28	.431
5	6	3,66	4	0,87	-3,05	9,25	0,91	.380
	59	3,71	4	0,83	-3,23	10,10	0,93	.220
	1	3,78	4	0,65	-3,66	15,20	0,94	.331
	103	2,62	3	1,55	-0,67	-1,09	0,66	.180
6	85	1,54	1	1,64	0,37	-1,57	0,38	.343
	48	0,23	0	0,77	3,71	13,71	0,06	.471
	21	0,80	0	1,34	1,48	0,80	0,2	.505
	29	1,09	0	1,62	1,02	-0,72	0,27	.481
7	90	0,90	0	1,47	1,35	0,21	0,23	.199
	108	2,41	2,5	1,35	-0,45	-0,88	0,6	.436
	45	2,36	3	1,34	-0,43	-0,97	0,59	.341
	10	3,01	3	1,22	-1,21	0,54	0,75	.353
8	93	1,99	2	1,56	-0,05	-1,54	0,5	.371
	16	2,05	2	1,55	-0,17	-1,52	0,51	.285
	56	1,98	2	1,54	0,03	-1,51	0,5	.125
9	5	1,94	2	1,57	0,01	-1,52	0,48	.341
	96	1,51	1	1,56	0,48	-1,37	0,38	.256
	77	1,25	0	1,57	0,78	-1,00	0,31	.307
10	100	1,52	1	1,62	0,47	-1,42	0,38	.369
	74	1,47	1	1,64	0,52	-1,41	0,37	.433
	31	1,76	1	1,74	0,22	-1,75	0,44	.330
11	104	1,78	2	1,46	0,06	-1,34	0,45	.300
	88	1,91	2	1,52	0,01	-1,39	0,48	
12	38	1,22	0	1,58	0,78	-1,04	0,31	.592
	66	1,19	0	1,60	0,83	-1,05	0,3	
13	111	2,95	4	1,44	-1,12	-0,20	0,74	.531
	82	1,92	2	1,71	-0,02	-1,75	0,48	.259
	112*	0,95	0	1,41	1,16	-0,15	0,24	.310
14[b]	33	3,33	4	1,21	-1,91	2,52	0,83	.203
	8	2,77	3	1,44	-0,90	-0,59	0,69	.043
	69	2,89	4	1,48	-1,06	-0,41	0,72	.362
	106*	1,43	1	1,56	0,57	-1,25	0,64	.349
15	27	1,30	0	1,57	0,77	-0,98	0,32	.365
	95	2,26	3	1,72	-0,24	-1,69	0,57	.350
	50	1,57	1	1,55	0,47	-1,31	0,39	.357
	19	1,32	0	1,64	0,72	-1,21	0,33	.272
	11*	2,89	3,5	1,45	-1,11	-0,21	0,72	.103
16	34	1,14	0	1,62	0,96	-0,81	0,29	.331
	43	0,84	0	1,54	1,43	0,20	0,21	.389
	17	0,86	0	1,48	1,40	0,30	0,21	.497
	114*	3,77	4	0,75	-3,70	13,98	0,94	.131
17[a]	105	1,62	1	1,68	0,38	-1,54	0,4	.178
	57	0,80	0	1,44	1,43	0,33	0,2	-.023
	83*	2,70	3	1,47	-0,78	-0,81	0,68	.053
18[b]	39	0,62	0	1,25	1,86	2,01	0,16	.243
	86	0,84	0	1,43	1,42	0,42	0,21	.399
	97*	3,83	4	0,61	-4,10	18,69	0,96	.129
19[b]	22	1,88	2	1,62	-0,01	-1,66	0,47	.367
	13	1,64	2	1,62	0,26	-1,58	0,41	.295
	75*	3,36	4	1,08	-2,15	4,19	0,84	.286
20[b]	79	0,63	0	1,32	1,89	1,96	0,16	.423
	94	0,41	0	1,04	2,55	5,29	0,1	.475
	3*	3,83	4	0,52	-3,40	12,27	0,96	.084
21[b]	61	0,91	0	1,30	1,19	0,02	0,23	.405
	70	1,52	1	1,67	0,53	-1,45	0,38	.512
	65*	2,09	2	1,54	-0,21	-1,47	0,52	.288
23[b]	18	2,94	3	1,27	-1,16	0,34	0,74	.434
	35	2,65	3	1,41	-0,83	-0,57	0,66	.226
	89*	1,28	1	1,50	0,74	-0,99	0,32	.299
24[b]	76	3,50	4	0,97	-2,39	5,56	0,88	.266
	9	3,67	4	0,86	-3,16	10,06	0,92	.251
	44*	1,00	0	1,60	1,13	-0,52	0,25	.257
25	20	1,39	0	1,65	0,56	-1,42	0,35	.334
	30	1,24	0	1,62	0,73	-1,22	0,31	.636
	84*	2,70	3	1,57	-0,78	-1,04	0,68	.375
26	7	3,14	4	1,37	-1,42	0,53	0,79	.549
	107	3,15	4	1,42	-1,41	0,39	0,79	.524
	78*	1,20	0	1,55	0,81	-1,01	0,3	.631
27[a]	42	3,30	4	1,19	-1,76	2,07	0,83	.314
	15	3,42	4	1,11	-1,92	2,61	0,86	.402
	109	3,55	4	0,94	-2,43	5,63	0,89	.240
	52*	1,99	2	1,77	-0,01	-1,79	0,5	.174
28[b]	2	3,81	4	0,58	-4,04	19,97	0,95	.033
	60	2,87	4	1,46	-0,98	-0,49	0,72	.027
	28*	1,87	2	1,67	0,08	-1,68	0,53	.043
29[b]	58	2,46	3	1,62	-0,48	-1,40	0,61	-.016
	73	3,75	4	0,79	-3,71	13,98	0,94	-.056
	37*	2,22	3	1,75	-0,26	-1,71	0,56	.111
30[a]	64	0,88	0	1,58	1,37	0,04	0,22	.391
	24	1,49	0	1,82	0,56	-1,60	0,37	.395
	87*	3,60	4	0,97	-2,66	6,42	0,9	.038
31[b]	99	3,83	4	0,57	-4,34	22,38	0,96	-.001
	47	3,54	4	1,02	-2,38	4,86	0,89	.472
	40*	0,89	0	1,41	1,30	0,13	0,22	.354
32	12	0,86	0	1,48	1,38	0,22	0,22	.649
	81	0,93	0	1,58	1,27	-0,19	0,23	.610
	62*	3,84	4	0,58	-4,36	21,62	0,96	.263
33	53	3,86	4	0,70	-5,23	26,69	0,96	.528
	71	3,85	4	0,68	-4,87	23,85	0,96	.307
	23	3,72	4	0,84	-3,47	11,77	0,93	.373
	102*	0,57	0	1,33	2,09	2,61	0,14	.109
34[a]	55	1,79	2	1,55	0,06	-1,59	0,45	.105
	32	0,84	0	1,56	1,43	0,18	0,21	.303
	113*	3,47	4	1,30	-2,22	3,17	0,87	-.131
35	67	1,95	2	1,60	-0,02	-1,60	0,49	.458
	51	2,14	2	1,51	-0,17	-1,43	0,54	.332
	26	2,37	3	1,62	-0,41	-1,47	0,59	.478
	68*	2,15	3	1,72	-0,16	-1,72	0,54	-.171
36[a]	49	0,65	0	1,42	1,84	1,58	0,16	.466
	46	1,40	1	1,54	0,61	-1,15	0,35	.204
	91*	3,73	4	0,87	-3,56	12,29	0,93	.229

Note. [a] Subscale was excluded. [b] Subscale underwent major re-organization. * Negative item.

_____
(Code number)

Dear participant,

On the following pages, you will be asked questions about your experiences and opinions on issues that are related to being indigenous. Please read each item carefully, then answer it spontaneously. Because the statements extend over a wide range of possible views you will find some statements highly corresponding with your own views and others less so. This is in fact intended and should not bother you. There are no right or wrong answers to the questions.

Before you start answering the questions, please provide some of your personal details in the box below. These details will be used only for statistical purposes and will not allow your answers to be identified.

Thank you for joining this study!

Age: _____ Sex: Female.....O Years at school: _____
Male.....O

Marital status:	Single..... O	Employment status:	Employed.....O
	De facto..... O		Unemployed..... O
	Married..... O		Pension..... O
	Separated..... O		Homemaker..... O
	Divorced..... O		Student..... O
	Widowed..... O		Retired..... O
	Other.....O		Other.....O
Religious affiliation:	Traditional..... O	Spoken language(s):	English only.....O
	Christian.....O		English better than Aboriginal language..... O
	Other.....O		English and Aboriginal language equally..... O
	None.....O		Aboriginal language better than English.....O
Living area:	Aboriginal reserve..... O		
	Rural area, Aboriginal community..... O		
	Urban area, Aboriginal community.....O		
	Rural area, away from Aboriginal community.....O		
	Urban area, away from Aboriginal community..... O		

APPENDIX D-1 (2): RDQ, study 3 version.

RDQ

		Wrong	Somewhat wrong	Not sure	Somewhat right	Right
1.	I feel a strong attachment to the Aboriginal community.					
2.	There is racism against Aboriginal people in Australia.					
3.	I get along well with white people.					
4.	I feel left out by society.					
5.	There is no point in teaching Aboriginal traditions to young Aboriginals.					
6.	White people have brought useful technologies to Australia.					
7.	I feel angry towards white people.					
8.	Colonization has changed Aboriginal cultures forever.					
9.	White people do not treat Aboriginal people as equals.					
10.	I tend to argue with Aboriginal people.					
11.	I feel confused about who I am.					
12.	I am a member of an Aboriginal rights organization.					
13.	I practice traditional Aboriginal arts.					
14.	I take important responsibilities in the Aboriginal community.					
15.	I try to avoid contact with white people whenever I can.					
16.	There is no value in Aboriginal traditions.					
17.	Real discrimination does not exist in Australia.					
18.	I think about white people positively.					
19.	Aboriginal culture is not relevant to today's world.					
20.	I do not trust white people.					
21.	I am not proud to be Aboriginal.					
22.	When I hear the Australian national anthem I sing or hum along.					
23.	I get along well with Aboriginal people.					

2

RDQ

		Wrong	Somewhat wrong	Not sure	Somewhat right	Right
24.	I experience racism every day of my life.					
25.	I am kind to Aboriginal people.					
26.	I feel uncertain about who I am.					
27.	I feel no attachment to the Aboriginal community.					
28.	I mingle with white people every day.					
29.	White people have better opportunities than Aboriginal people.					
30.	I am at home in neither the Aboriginal community nor white society.					
31.	I try to forget my problems by taking drugs or drinking alcohol.					
32.	Aboriginal cultures are worth to be kept alive.					
33.	I do not get along with white people.					
34.	I work more than 8 hours a day.					
35.	There is no racism in Australia.					
36.	Aboriginal cultures and traditions are on the brink of dying out.					
37.	I never sing or hum along to the Australian anthem.					
38.	I am not a member of any Aboriginal rights organization.					
39.	I do not practice Aboriginal traditions.					
40.	I feel different from all other people.					
41.	It is useful to pass on traditional Aboriginal knowledge to young Aboriginals.					
42.	I try to avoid contact with Aboriginal people whenever I can.					
43.	I expect to experience racism when I am amongst white people.					
44.	I do not meet the expectations of either the Aboriginal or the white culture.					
45.	I trust white people.					
46.	I do not know what others expect me to do.					

RDQ

		Wrong	Somewhat wrong	Not sure	Somewhat right	Right	
47.	I have not been discriminated against.						
48.	I have negative views about white people.						
49.	I have lost touch with Aboriginal culture but I am not part of Western culture.						
50.	Aboriginal people are treated fairly in the Australian society.						
51.	I do not consume drugs or alcohol.						
52.	I have no contact with Aboriginal communities.						
53.	I tend to argue with white people.						
54.	I have not been hassled for being Aboriginal.						
55.	I am kind to white people.						
56.	I work less than 8 hours a day.						
57.	I do not get along with Aboriginal people.						
58.	White people did not affect Aboriginal cultures.						
59.	Australian society is racist against Aboriginal people.						
60.	I mingle with Aboriginal people every day.						
61.	Everyone has the same opportunities in Australia.						
62.	I am proud to be Aboriginal.						
63.	I feel part of the Aboriginal community.						

Thank you!

APPENDIX D-2: EXP-DM and SWLS.

RACISM EXPERIENCES - DOMAINS (EXP-DM)

Please write the number from the scale below that best indicates how much you have personally experienced racism, racial discrimination, or racial prejudice during the past 2 years in each of the following areas of your life.

0 = NOT AT ALL
1 = A LITTLE
2 = SOMEWHAT
3 = A LOT
4 = EXTREMELY

_____ a) School

_____ b) Employment / Job

_____ c) Housing

_____ d) Social situations / Social relationships

_____ e) Shopping, patronizing businesses

_____ f) Law enforcement, police

_____ g) Legal matters, court appearance

_____ h) Health care

_____ i) Loans, credit, financial matters

_____ j) Leisure, recreational activities

SWLS

Below are five statements that you may agree or disagree with. Using the 1-7 scale below indicate your agreement with each item by placing the appropriate number on the line preceding that item. Please be open and honest in your responding.

- 7 – Strongly agree
- 6 – Agree
- 5 – Slightly agree
- 4 – Neither agree nor disagree
- 3 – Slightly disagree
- 2 – Disagree
- 1 – Strongly disagree

_____ In most ways my life is close to my ideal.

_____ The conditions of my life are excellent.

_____ I am satisfied with my life.

_____ So far I have gotten the most important things I want in life.

_____ If I could live my life over, I would change almost nothing.

5

Note. RaLES from The Racism and Life Experiences Scales (RaLES), by S. P. Harrell, 1997, unpublished manuscript. Copyright 1997 by S. P. Harrell. Reprinted with permission.
SWLS from The Satisfaction With Life Scale, by E. Diener, R. A. Emmons, R. J. Larsen, and S. Griffin, 1985, *Journal of Personality Assessment, 49(1)*, 71-75. Copyright 1985 by E. Diener. Reprinted with permission.

APPENDIX D-3 (1): Item statistics after study 3 and study 4. Mean [*M*], median [*MD*], standard deviation [*SD*], skewness, kurtosis, and expected empirical distribution.

Facet	Item	Study 3					Study 4					Expected distri-bution
		M	*MD*	*SD*	Skew-ness	Kurtosis	*M*	*MD*	*SD*	Skew-ness	Kurtosis	
1	2	3,40	4	1,11	-2,12	3,66	3,31	4	0,85	-1,27	1,43	Biased
	59	3,10	3	1,17	-1,41	1,26	3,02	3	1,17	-1,15	0,34	Biased
2	35	0,50	0	0,98	2,20	4,32	0,77	0	1,11	1,46	1,28	Biased
	17	0,71	0	1,27	1,66	1,42	0,84	1	1,07	1,36	1,21	Biased
3	24	2,34	3	1,61	-0,43	-1,45	1,83	2	1,24	0,19	-1,07	Bimodal
	43	2,45	3	1,64	-0,53	-1,39	2,29	3	1,28	-0,42	-0,86	Bimodal
4	54	1,40	1	1,60	0,68	-1,20	1,84	2	1,38	0,05	-1,43	Bimodal
	47	1,48	1	1,60	0,55	-1,31	1,74	1	1,33	0,22	-1,25	Bimodal
5	63	3,78	4	0,65	-3,90	17,58	3,66	4	0,74	-2,65	7,80	Biased
	1	3,76	4	0,66	-3,71	16,13	3,53	4	0,77	-2,13	5,59	Biased
6	27	0,52	0	1,11	2,13	3,34	0,40	0	0,84	2,49	6,23	Biased
	19	0,58	0	1,22	1,98	2,46	0,79	0	1,22	1,37	0,54	Biased
7	18	2,21	3	1,35	-0,44	-1,04	2,45	3	1,01	-0,56	-0,08	Bimodal
	6	2,78	3	1,29	-1,09	0,17	2,94	3	0,82	-1,14	2,23	Bimodal
8	48	2,00	2	1,46	-0,08	-1,47	1,60	1	1,17	0,51	-0,58	Bimodal
	7	1,81	2	1,51	0,08	-1,51	1,01	1	1,08	1,03	0,42	Bimodal
9	30	1,59	1	1,55	0,29	-1,51	1,47	1	1,23	0,35	-1,05	Bimodal
	49	1,41	1	1,52	0,54	-1,28	1,29	1	1,25	0,66	-0,86	Bimodal
10	40	1,18	0	1,49	0,86	-0,79	1,61	1	1,22	0,33	-1,04	Bimodal
	4	1,66	2	1,47	0,20	-1,38	1,54	1	1,12	0,59	-0,41	Bimodal
11	44	1,24	1	1,40	0,58	-1,14	1,14	1	0,90	0,40	-0,40	Irregular
	46	1,69	2	1,49	0,19	-1,36	1,59	2	1,02	0,25	-0,11	Irregular
12	11	1,04	0	1,48	1,01	-0,57	0,59	0	1,00	1,94	3,19	Biased
	26	1,20	0	1,56	0,78	-1,05	0,77	0	1,10	1,53	1,52	Biased
13	8	2,67	3	1,59	-0,81	-0,95	2,64	3	1,11	-0,48	-0,51	Bimodal
	36	2,07	3	1,62	-0,25	-1,59	1,96	2	1,31	0,06	-1,15	Bimodal
	58	1,49	1	1,68	0,53	-1,44	0,83	0	1,14	1,31	0,76	Bimodal
14	50	1,38	1	1,47	0,56	-1,20	1,03	1	1,14	0,87	-0,35	Bimodal
	9	2,91	3	1,43	-1,20	0,00	2,83	3	1,02	-1,01	0,76	Bimodal
15	61	1,48	1	1,61	0,54	-1,34	1,11	1	1,31	0,89	-0,52	Bimodal
	29	2,88	4	1,52	-0,98	-0,65	2,96	3	1,06	-0,77	-0,17	Bimodal
16	16	0,45	0	1,02	2,46	5,27	0,36	0	0,87	2,80	7,54	Biased
	32	3,89	4	0,55	-6,08	39,20	3,81	4	0,65	-4,47	21,60	Biased
18	10	1,59	1	1,54	0,23	-1,61	1,24	1	1,16	0,64	-0,78	Biased
	25	3,68	4	0,70	-3,12	12,15	3,55	4	0,68	-2,18	7,59	Biased
19	53	1,82	2	1,49	-0,05	-1,57	1,75	1	1,18	0,22	-1,14	Bimodal
	55	2,86	3	1,24	-0,95	-0,20	2,91	3	0,83	-1,18	2,33	Bimodal
20	42	0,71	0	1,30	1,58	0,89	0,21	0	0,57	4,00	20,96	Biased
	60	3,58	4	0,99	-2,53	5,44	2,95	3	1,18	-0,84	-0,53	Biased
21	15	1,30	0	1,54	0,69	-1,13	0,66	0	1,00	1,77	2,68	Bimodal
	28	2,58	3	1,49	-0,64	-1,10	3,25	4	1,12	-1,82	2,57	Bimodal
22	23	3,80	4	0,55	-3,55	14,29	3,01	3	0,84	-1,34	2,78	Biased
	57	0,44	0	0,94	2,37	5,04	1,17	1	1,16	0,93	0,06	Biased
23	3	2,98	3	1,21	-1,25	0,62	3,60	4	0,68	-2,18	6,19	Bimodal
	33	1,33	1	1,40	0,56	-1,17	0,68	0	1,16	1,89	2,58	Bimodal
24	34	2,04	2	1,77	-0,05	-1,79	2,39	3	1,48	-0,37	-1,39	Bimodal
	56	1,72	1	1,78	0,29	-1,73	1,43	1	1,36	0,54	-1,09	Bimodal
25	31	1,06	0	1,58	1,02	-0,75	0,34	0	0,79	2,94	9,16	Bimodal
	51	2,47	4	1,74	-0,44	-1,62	2,93	4	1,44	-0,95	-0,71	Bimodal
26	13	2,43	3	1,74	-0,49	-1,56	2,30	3	1,46	-0,17	-1,52	Bimodal
	39	1,10	0	1,53	1,05	-0,55	1,48	1	1,45	0,33	-1,51	Bimodal
28	12	2,24	3	1,77	-0,27	-1,72	2,27	3	1,59	-0,15	-1,66	Bimodal
	38	1,48	0	1,73	0,55	-1,50	1,70	1	1,54	0,09	-1,68	Bimodal
29	22	2,82	3	1,50	-0,96	-0,61	2,42	3	1,23	-0,54	-0,82	Bimodal
	37	1,40	1	1,61	0,69	-1,18	1,43	1	1,28	0,71	-0,68	Bimodal

APPENDIX D-3 (2): Item statistics after study 3 and study 4 (2). Mean [M], median [MD], standard deviation [SD], skewness, kurtosis, and expected empirical distribution.

Facet	Item	Study 3					Study 4					Exprected distributi-on
		M	*MD*	*SD*	Skew-ness	Kurtosis	*M*	*MD*	*SD*	Skew-ness	Kurtosis	
31	14	3,08	4	1,37	-1,40	0,61	2,30	3	1,42	-0,23	-1,38	Bimodal
	52	0,40	0	1,01	2,83	7,14	0,96	0	1,35	1,16	-0,16	Bimodal
32	5	0,52	0	1,23	2,25	3,45	0,34	0	0,84	3,11	9,86	Biased
	41	3,80	4	0,77	-4,30	18,11	3,75	4	0,64	-3,09	9,73	Biased
33	62	3,90	4	0,55	-6,28	41,30	3,75	4	0,62	-3,61	16,57	Biased
	21	0,66	0	1,43	1,85	1,59	0,77	0	1,41	1,66	1,11	Biased
35	20	2,21	3	1,46	-0,31	-1,29	1,74	2	1,21	0,39	-0,75	Bimodal
	45	1,87	2	1,35	-0,05	-1,28	2,21	2	1,06	-0,52	-0,32	Bimodal

APPENDIX D-4 (1): Item-intercorrelation analyses in study 3.[a]

Item (facet, pole)	Item (RDQ-T)																
	2	59	63	1	8	36	58	13	39	23	57	15	28	14	52	62	21
2 (1, +)	1	.178(*)	-.084	-.027	.148	.127	.028	-.030	.021	-.061	.016	-.066	-.156	-.046	.101	-.072	.050
59 (1, +)		1	.124	.143	.019	-.117	-.122	.170(*)	.118	-.016	-.078	.142	.032	.066	.120	.148	.154
63 (5, +)			1	.435(**)	-.131	.002	-.139	.246(**)	.180(*)	.226(*)	.099	.105	.050	.191(*)	.252(**)	.524(**)	.125
1 (5, +)				1	-.172(*)	-.112	-.059	.242(**)	.134	.320(**)	.062	-.023	-.029	.236(**)	.299(**)	.232(*)	.206(*)
8 (13, +)					1	.253(**)	.336(**)	-.225(**)	-.286(**)	-.123	.022	-.117	-.224(**)	-.132	-.024	-.209(*)	-.121
36 (13, +)						1	.255(**)	-.239(**)	-.320(**)	-.011	.010	-.162(*)	-.129	-.138	-.050	-.043	-.149
58 (13, -)							1	-.241(**)	-.180(*)	-.074	.141	-.131	-.126	-.089	.055	-.116	-.069
13 (26, +)								1	.412(**)	-.061	-.229(**)	.408(**)	.143	.346(**)	.063	.118	.028
39 (26, -)									1	.043	-.081	.118	.214(**)	.301(**)	.171(*)	.083	.173(*)
23 (22, +)										1	.284(**)	-.049	-.064	.217(*)	.331(**)	.246(**)	.163
57 (22, -)											1	-.291(**)	-.134	.006	.328(**)	.070	.047
15 (21, +)												1	.222(**)	.070	-.020	.052	-.090
28 (21, -)													1	-.040	-.132	.042	.048
14 (31, +)														1	.236(**)	.087	.169(*)
52 (31, -)															1	.211(*)	.236(**)
62 (33, +)																1	.155
21 (33, -)																	1

Item (facet, pole)	Item (RDQ-R)											
	24	43	48	7	50	9	53	55	12	38	20	45
24 (3, +)	1	.234(**)	.258(**)	.233(**)	-.054	.101	.236(**)	.063	.387(**)	.234(**)	.231(**)	.189(*)
43 (3, +)		1	.199(**)	.093	.209(**)	.179(*)	.263(**)	.093	.142	.059	.190(*)	.151(*)
48 (8, +)			1	.324(**)	.002	.077	.232(**)	.106	.252(**)	.027	.367(**)	.269(**)
7 (8, +)				1	-.050	.108	.320(**)	.126	.351(**)	.109	.397(**)	.253(**)
50 (14, -)					1	.253(**)	.094	.083	-.150(*)	-.109	.002	.050
9 (14, +)						1	.194(*)	.065	.036	-.030	.179(*)	.277(**)
53 (19, +)							1	.131	.226(**)	.141	.298(**)	.262(**)
55 (19, -)								1	.010	-.023	.207(**)	.136
12 (28, +)									1	.450(**)	.269(**)	.188(*)
38 (28, -)										1	.078	.101
20 (35, +)											1	.288(**)
45 (35, -)												1

APPENDIX D-4 (2): Item-intercorrelation analyses in study 3.[a]

Item (facet, pole)	Item (RDQ-A)													
	54	47	18	6	61	29	34	56	3	33	42	60	22	37
54 (4, +)	1	.214(**)	.059	.025	.160(*)	-.021	-.031	-.160(*)	.016	-.002	-.114	.076	.107	.082
47 (4, +)		1	.078	-.044	.249(**)	.128	-.064	-.069	.049	.128	-.032	.133	.077	-.035
18 (7, +)			1	.009	.125	-.132	.005	-.037	.371(**)	.205(**)	-.033	.138	.027	-.018
6 (7, +)				1	.050	.064	-.047	-.049	.106	.011	-.192(*)	-.067	.037	.193(*)
61 (15, +)					1	.255(**)	.002	-.051	.002	-.017	-.066	.114	.137	.059
29 (15, -)						1	.075	.044	-.084	-.021	-.075	.039	.210(**)	.045
34 (24, +)							1	.431(**)	-.017	.002	-.139	.026	-.124	-.078
56 (24, -)								1	.092	.081	-.145	-.063	-.190(*)	-.082
3 (23, +)									1	.421(**)	-.136	-.092	.014	-.009
33 (23, -)										1	-.339(**)	-.166(*)	-.056	-.008
42 (20, +)											1	.171(*)	.088	-.005
60 (20, -)												1	.010	-.081
22 (29, +)													1	.563(**)
37 (29, -)														1

Item (facet, pole)	Item (RDQ-M)																			
	35	17	27	19	30	49	40	4	44	46	11	26	16	32	31	51	5	41	10	25
35 (2, +)	1	.335(**)	.112	.194(*)	.058	.104	.021	.066	.047	-.052	.012	.148	.335(**)	.239(**)	.069	-.082	.136	.210(*)	.027	.013
17 (2, +)		1	.172(*)	.197(*)	.039	.097	-.093	-.005	-.012	.010	.085	.118	.315(**)	.189(*)	.209(*)	-.025	.082	.027	-.068	-.009
27 (6, +)			1	.319(**)	.250(**)	.261(**)	.084	-.021	.176(*)	.075	.126	.187(*)	.422(**)	.330(**)	.087	.020	.516(**)	.203(*)	-.028	.315(**)
19 (6, +)				1	.159(*)	.125	.095	.077	.061	.218(**)	.243(**)	.163(*)	.343(**)	.394(**)	.051	-.030	.361(**)	.187(*)	.163(*)	.161
30 (9, +)					1	.160(*)	.092	.135	.307(**)	-.062	.068	.139	.218(**)	.195(*)	-.039	.084	.199(*)	.201(*)	.098	.214(**)
49 (9, +)						1	.182(*)	.117	.311(**)	.282(**)	.106	.262(**)	.291(**)	.131	.217(**)	.055	.297(**)	.107	-.009	.166(*)
40 (10, +)							1	.282(**)	.291(**)	.297(**)	.341(**)	.221(**)	.079	-.026	.188(*)	-.012	.098	-.036	.067	.040
4 (10, +)								1	.236(**)	.035	.151	.200(*)	.052	.026	.222(**)	.125	.028	.006	.040	-.061
44 (11, +)									1	.185(*)	.236(**)	.233(**)	.163	.044	.290(**)	.178(*)	.144	.112	-.003	.217(**)
46 (11, +)										1	.278(**)	.131	.091	-.054	.096	-.062	.077	-.017	-.024	.028
11 (12, +)											1	.539(**)	.132	-.011	.178(*)	.094	.038	-.063	.153	.030
26 (12, +)												1	.228(**)	.021	.139	.057	.076	-.028	.048	.104
16 (16, +)													1	.305(**)	.058	-.011	.436(**)	.351(**)	.065	.129
32 (16, -)														1	.110	-.068	.304(**)	.304(**)	.154	.281(**)
31 (25, +)															1	.255(**)	.105	.004	.071	.094
51 (25, -)																1	.021	.120	.015	.076
5 (32, +)																	1	.139	.157	.216(*)
41 (32, -)																		1	.014	.174
10 (18, +)																			1	.186(*)
25 (18, -)																				1

Note. [a] Kendall's tau coefficients are presented. *$p < .05$. **$p < .01$.

APPENDIX D-5: Characteristic values in study 3 and study 4. Item popularity [p_{it}], homogeneity [H_{it}], and power [r_{it}].

Sub-scale	Facet	Item	Study 3			Study 4		
			p_{it}	H_{it}	r_{it}	p_{it}	H_{it}	r_{it}
RDQ-T	1	2	0.85	0.012	-0.036	0.83	0.178	0.265
		59	0.78	0.066	0.106	0.76	0.144	0.199
	5	63	0.95	0.141	0.331	0.92	0.254	0.500
		1	0.94	0.122	0.309	0.88	0.179	0.314
	13	8	0.67	-0.058	-0.145	0.66	0.099	0.166
		36	0.52	-0.046	-0.170	0.49	0.015	-0.004
		58	0.38	-0.037	-0.018	0.21	0.160	0.227
	26	13	0.6	0.078	0.130	0.58	0.208	0.539
		39	0.27	0.068	0.160	0.37	0.242	0.598
	22	23	0.74	0.089	0.207	0.75	0.205	0.386
		57	0.33	0.013	-0.075	0.29	0.124	0.113
	21	15	0.33	0.017	0.064	0.17	0.119	0.322
		28	0.64	-0.021	-0.038	0.81	0.077	0.138
	31	14	0.77	0.094	0.203	0.58	0.167	0.411
		52	0.1	0.137	0.351	0.24	0.244	0.523
	33	62	0.98	0.098	0.278	0.94	0.246	0.385
		21	0.16	0.068	0.103	0.19	0.076	-0.004
RDQ-R	3	24	0.58	0.192	0.443	0.46	0.273	0.554
		43	0.61	0.103	0.335	0.57	0.268	0.503
	8	48	0.5	0.295	0.421	0.4	0.335	0.666
		7	0.45	0.21	0.491	0.25	0.222	0.412
	14	50	0.35	0.03	0.018	0.26	0.217	0.219
		9	0.72	0.24	0.204	0.71	0.155	0.337
	19	53	0.46	0.146	0.507	0.44	0.266	0.478
		55	0.72	0.091	0.226	0.73	0.197	0.259
	28	12	0.57	0.241	0.432	0.57	0.237	0.480
		38	0.35	0.191	0.209	0.43	0.243	0.489
	35	20	0.55	0.228	0.56	0.44	0.314	0.624
		45	0.47	0.195	0.443	0.55	0.315	0.635
RDQ-A	4	54	0.34	0.032	0.065	0.46	0.202	0.507
		47	0.37	0.062	0.227	0.44	0.236	0.560
	7	18	0.55	0.061	0.227	0.61	0.183	0.383
		6	0.69	0.007	-0.007	0.74	0.089	0.246
	15	61	0.37	0.078	0.301	0.28	0.168	0.348
		29	0.72	0.041	0.146	0.74	0.131	0.291
	24	34	0.52	0.003	0.051	0.6	0.027	0.093
		56	0.43	-0.015	-0.06	0.36	0.065	0.186
	23	3	0.95	0.056	0.186	0.9	0.128	0.218
		33	0.11	0.018	0.101	0.17	0.111	0.191
	20	42	0.18	-0.078	-0.302	0.05	0.074	0.134
		60	0.89	0.018	0.115	0.74	0.112	0.213
	29	22	0.71	0.069	0.225	0.61	0.160	0.371
		37	0.35	0.048	0.128	0.36	0.187	0.452
RDQ-M	2	35	0.13	0.073	0.162	0.19	0.100	0.421
		17	0.18	0.053	0.225	0.21	0.101	0.267
	6	27	0.13	0.163	0.379	0.1	0.200	0.170
		19	0.15	0.155	0.420	0.2	0.109	0.079
	9	30	0.4	0.112	0.269	0.37	0.184	0.355
		49	0.35	0.157	0.423	0.32	0.077	0.235
	10	40	0.3	0.108	0.317	0.4	0.067	0.357
		4	0.41	0.080	0.321	0.39	0.039	0.333
	11	44	0.31	0.149	0.461	0.29	0.136	0.104
		46	0.43	0.075	0.246	0.4	0.085	0.090
	12	11	0.26	0.135	0.436	0.15	0.154	0.383
		26	0.3	0.151	0.425	0.19	0.171	0.078
	16	16	0.15	0.181	0.521	0.09	0.154	0.167
		32	0.97	0.138	0.263	0.95	0.167	0.281
	18	10	0.41	0.103	0.137	0.31	0.101	0.354
		25	0.92	0.048	0.078	0.89	0.214	0.105
	25	31	0.27	0.162	0.344	0.09	0.108	0.175
		51	0.62	0.094	0.074	0.73	0.054	0.309
	32	5	0.13	0.034	0.408	0.09	0.142	0.249
		41	0.95	0.123	0.075	0.94	0.176	0.436

APPENDIX D-6: Conversion table for RDQ-subscales in study 3. Raw scores, percentiles, and stanine values.

RDQ-T

Raw score	Percentile	Stanine
0	0.0	
…	…	
23	0.8	
…	…	
34	0.8	1
35	1.6	
36	2.4	
37	2.4	
38	3.2	
39	4.0	
40	5.6	2
41	6.4	
42	7.2	
43	8.8	
44	15.2	3
45	16.8	
46	21.6	
47	28.8	4
48	36.8	
49	45.6	
50	51.2	5
51	62.4	
52	68.8	6
53	73.6	
54	77.6	
55	80.8	7
56	81.6	
57	86.4	
58	91.2	
59	92.8	8
60	93.6	
61	97.6	
62	98.4	
63	99.2	
64	100.0	
…	…	9
68	100.0	

RDQ-R

Raw score	Percentile	Stanine
0	0.0	
…	…	
5	0.0	
6	0.8	1
7	0.8	
8	1.6	
9	3.2	
10	5.6	
11	8.0	2
12	8.8	
13	9.6	
14	11.2	
15	12.0	
16	16.8	3
17	17.6	
18	21.6	
19	24.8	
20	29.6	
21	32.0	4
22	36.0	
23	39.2	
24	41.6	
25	50.4	
26	54.4	5
27	56.8	
28	60.0	
29	64.0	
30	64.0	6
31	68.0	
32	72.8	
33	77.6	
34	80.0	7
35	84.8	
36	88.0	
37	89.6	
38	91.2	8
39	92.0	
40	95.2	
41	98.4	
42	99.2	9
43	100.0	
…	…	
48	100.0	

RDQ-A

Raw score	Percentile	Stanine
0	0.0	
…	…	
4	0.0	
5	0.8	
6	0.8	
7	0.8	
8	0.8	
9	0.8	1
10	0.8	
11	0.8	
12	0.8	
13	1.6	
14	2.4	
15	2.4	
16	4.0	2
17	4.0	
18	6.4	
19	12.0	
20	17.6	3
21	18.4	
22	23.2	
23	30.4	4
24	40.0	
25	46.4	
26	51.2	5
27	54.4	
28	61.6	
29	66.6	6
30	73.6	
31	77.6	
32	80.0	
33	83.2	7
34	87.2	
35	88.8	
36	93.6	8
37	94.4	
38	96.8	
39	97.6	
40	98.4	9
41	99.2	
42	100.0	
…	…	
56	100.0	

RDQ-M

Raw score	Percentile	Stanine
0	1.6	
1	1.6	
2	2.4	1
3	2.4	
4	4.8	
5	6.4	2
6	6.4	
7	12.8	
8	13.6	
9	16.0	3
10	16.9	
11	20.8	
12	29.6	
13	32.0	4
14	38.4	
15	45.6	
16	49.6	5
17	54.4	
18	57.6	
19	60.8	
20	64.0	
21	68.8	
22	70.4	
23	73.6	6
24	76.0	
25	76.0	
26	76.0	
27	80.8	
28	84.0	
29	84.0	
30	85.6	
31	86.4	
32	86.4	7
33	87.2	
34	88.0	
35	90.4	
36	92.8	8
37	92.8	
38	94.4	
39	96.0	
40	96.8	
41	96.8	
42	98.4	
…	…	9
49	98.4	
50	99.2	
…	…	
62	92.2	
63	100.0	
…	…	
80	100.0	

APPENDIX E-1: Plain Language Statement, study 4 version.

FRIEDRICH-SCHILLER-UNIVERSITÄT JENA

INSTITUT FÜR PSYCHOLOGIE

Invitación a la participación en el estudio

"Development of the Responses to Racial And Ethnic Discrimination Questionnaire (RDQ)"

Estimado(a) participante,

El Instituto de Psicología de la Universidad Friedrich Schiller de Jena (Alemania) está realizando un estudio para desarrollar un cuestionario con el fin de evaluar las reacciones psicológicas a la discriminación racial y étnica en personas indígenas. Anticipamos que el estudio mejorará nuestra comprensión acerca de cómo los indígenas experimentan y reaccionan al racismo, y también anticipamos que los resultados de este estudio aumentarán la conciencia sobre el impacto del racismo. La señora Mildred Girndt, psicóloga diplomada, y el Prof. Dr. Rainer Riemann son los responsables del estudio. En el marco del estudio estamos recogiendo datos de un gran número de personas indígenas en Australia y Chile. La presente tiene por objeto invitarle a usted a participar en este estudio.

Si usted está de acuerdo con participar en este estudio, le pedimos completar un cuestionario que incluye frases con respecto a usted mismo(a), otros indígenas y otros no-indígenas. Le rogamos que exprese su opinión sobre si usted está de acuerdo o en desacuerdo con la frase correspondiente. El cuestionario es fácil de completar y usted debiera completarlo en unos 20 minutos. Las frases y las alternativas para responder son del tipo:

Siento un fuerte apego
por el pueblo Mapuche. Muy en desacuerdo – En desacuerdo – No estoy seguro – De acuerdo – Muy de acuerdo

Antes de llenar el cuestionario, le pedimos firmar un formulario de consentimiento que será guardado por separado de los datos proporcionados por usted. Los datos serán guardados en un lugar seguro en la Facultad de Ciencias Sociales y del Comportamiento de la Universidad de Jena y serán accesibles solamente a los investigadores. Para proteger su privacidad, no vamos a pedirle que aporte informaciones de identificación personal en este cuestionario. En el caso de que algún día quisiéramos usar los datos compilados para otro fin que el arriba indicado (por ejemplo para investigaciones posteriores), vamos a pedir a los participantes por escrito que declaren su conformidad con esto.

Su participación es voluntaria. Los participantes serán libres de desistir de su participación en cualquier momento, sin consecuencias adversas. En tal caso, la totalidad de las informaciones recogidas hasta el momento de su desistimiento sería destruida. Si usted quisiera saber los resultados del estudio, le pondremos a su disposición un resumen de los mismos. Por favor, contáctenos si desea recibir más informaciones sobre el estudio.

Muchas gracias por su interés.

Mildred Girndt

Si usted tiene preguntas de cualquier tipo con respecto a este proyecto de investigación, le pedimos ponerse en contacto con el investigador responsable:
Dipl.-Psych. Mildred Girndt, Friedrich-Schiller-Universität Jena, Institut für Psychologie, Humboldtstrasse 11, 07743 Jena, Alemania; Fono: (09) 82455704 (Chile) o 0049 3641 945160 (Alemania); E-mail: mildred.girndt@uni-jena.de.

APPENDIX E-2: Consent form, study 4 version.

FRIEDRICH-SCHILLER-UNIVERSITÄT JENA

INSTITUT FÜR PSYCHOLOGIE

Formulario de consentimiento

Development of the Responses to Racial And Ethnic Discrimination Questionnaire (RDQ)

Yo, _____ , me declaro

conforme con mi participación en el proyecto de investigación de la Universidad Friedrich Schiller de Jena arriba especificado, realizado bajo la responsabilidad de

Dipl.-Psych. Mildred Girndt y Prof. Dr. Rainer Riemann.

Me han informado sobre el proyecto y he leído la invitación para participar en el estudio, la cual guardaré bien. Entiendo que mi consentimiento a participar en el estudio significa que estoy dispuesto(a) a llenar un cuestionario en que me preguntan sobre mis experiencias y opiniones con respecto a asuntos relacionados con el ser un indígena.

Confirmo que:

1. Al recibir mi cuestionario, el mismo será codificado y mi nombre y dirección serán guardados por separado del mismo.
2. Informaciones cualesquiera proporcionadas por mí no serán publicadas en ninguna forma que podría revelar mi identidad a terceros, i.e. mi persona quedará completamente anónima.
3. Los resultados compilados serán utilizados para fines de investigación y pueden ser publicados en revistas científicas y académicas.
4. Resultados individuales no serán comunicados a otras personas a no ser que yo lo haya deseado y haya dado mi autorización.
5. Puedo retirar mi consentimiento en cualquier momento durante el estudio. En tal caso, mi participación en el estudio de investigación cesará inmediatamente y no se hará uso de ninguna de las informaciones dadas por mí.

Firma: ***Fecha:***

APPENDIX E-3 (1): RDQ, study 4 version.

_____
(Código)

Estimado(a) participante,

En las páginas siguientes vamos a preguntarle sus experiencias y opiniones con respecto a asuntos relacionados con ser una persona indígena. Por favor, lea cada frase cuidadosamente y luego contéstela espontáneamente. Debido a que los temas acerca de los cuales se pregunta abarcan una gran cantidad de puntos de vista, es posible que usted encuentre que algunas afirmaciones se corresponden completamente con sus propias opiniones. En otros casos usted no estará de acuerdo. Esto es intencional y no debería molestarle. No hay respuestas correctas o incorrectas.

Antes de comenzar a responder, por favor proporciónenos algunos datos personales en el cuadro siguiente. Estos datos solo se utilizaran para propósitos estadísticos, de ninguna manera se usarán para identificar sus respuestas.

¡Muchas gracias por su participación en este estudio!

Edad: _____ Sexo: Femenino....O Masculino....O Escolaridad: _____

Estado civil:	Soltero.....O	Situación laboral:	Con trabajo.....O
	Conviviendo.....O		Desempleado.....O
	Casado.....O		Pensión.....O
	Separado.....O		Dueña de casa.....O
	Divorciado.....O		Estudiante.....O
	Viudo.....O		Jubilado.....O
	Otro.....O		Otro.....O
Afiliación religiosa:	Mapuche.....O	Idioma(s) hablado(s):	Solamente castellano....O
	Cristiana.....O		Castellano mejor que mapudungun.....O
	Otra.....O		Dominio igual del castellano y mapudungun...O
	Ninguna.....O		Mapudungun mejor que castellano.....O

Zona residencial: Zona rural, comunidad Mapuche.....O
Zona rural, afuera de una comunidad Mapuche.....O
Zona urbana.....O

APPENDIX E-3 (2): RDQ, study 4 version.

RDQ

		Muy en desacuerdo	En desacuerdo	No estoy seguro	De acuerdo	Muy de acuerdo
1.	Siento un fuerte apego por el pueblo Mapuche.					
2.	Hay racismo contra los Mapuches en Chile.					
3.	Me llevo bien con los huincas.					
4.	Me siento dejado de lado por la sociedad.					
5.	No tiene sentido enseñar a los jóvenes Mapuches las tradiciones Mapuches.					
6.	Los huincas han traído tecnologías útiles a Chile.					
7.	Siento rabia hacia los huincas.					
8.	La colonización ha cambiado la cultura Mapuche para siempre.					
9.	Los huincas no tratan a los Mapuches como personas iguales a ellos.					
10.	Tiendo a discutir con personas Mapuches.					
11.	Me siento confundido sobre quién soy.					
12.	Soy miembro de una organización Mapuche.					
13.	Practico artes tradicionales Mapuches.					
14.	Tengo responsabilidades importantes en el pueblo Mapuche.					
15.	Trato de evitar el contacto con huincas cada vez que puedo.					
16.	Las tradiciones Mapuches no tienen mayor valor.					
17.	En Chile no existe discriminación real.					
18.	Pienso positivamente sobre los huincas.					
19.	La cultura Mapuche no es relevante para el mundo de hoy.					
20.	No confío en los huincas.					
21.	No me siento orgulloso de ser Mapuche.					
22.	Cuando escucho el himno nacional de Chile lo canto o tarareo.					
23.	Me llevo bien con las personas Mapuches.					

2

APPENDIX E-3 (3): RDQ, study 4 version.

RDQ

		Muy en desacuerdo	En desacuerdo	No estoy seguro	De acuerdo	Muy de acuerdo
24.	Cada día de mi vida experimento racismo.					
25.	Soy amable con las personas Mapuches.					
26.	Me siento inseguro sobre quién soy.					
27.	No siento apego por el pueblo Mapuche.					
28.	Me junto con huincas todos los días.					
29.	Los huincas tienen mejores oportunidades que los Mapuches.					
30.	Ni en la sociedad huinca ni en la sociedad Mapuche me siento como en mi casa.					
31.	Trato de olvidar mis problemas tomando drogas o alcohol.					
32.	La cultura Mapuche merece ser mantenida viva.					
33.	No me llevo bien con los huincas.					
34.	Trabajo más de 8 horas al día.					
35.	No hay racismo en Chile.					
36.	La cultura y las tradiciones Mapuches están a punto de desaparecer.					
37.	Nunca canto o tarareo el himno nacional chileno.					
38.	No soy miembro de ninguna organización mapuche.					
39.	No practico tradiciones Mapuches.					
40.	Me siento diferente a todas las demás personas.					
41.	Es útil trasmitir el conocimiento Mapuche tradicional a los jóvenes Mapuches.					
42.	Trato de evitar el contacto con Mapuches cada vez que puedo.					
43.	Cuando esté entre huincas es probable que experimente racismo.					
44.	No cumplo con las expectativas ni de la cultura Mapuche ni de la cultura huinca.					
45.	Confío en los huincas.					
46.	No sé qué es lo que los demás esperan que yo haga.					

APPENDIX E-3 (4): RDQ, study 4 version.

RDQ

		Muy en desacuerdo	En desacuerdo	No estoy seguro	De acuerdo	Muy de acuerdo
47.	No he sido discriminado.					
48.	Tengo una imagen negativa sobre los huincas.					
49.	He perdido contacto con la cultura Mapuche, pero no soy parte de la cultura huinca.					
50.	Los Mapuches son tratados de manera justa por la sociedad chilena.					
51.	No consumo drogas ni alcohol.					
52.	No tengo contacto con comunidades Mapuches ni en el campo ni en la ciudad.					
53.	Tiendo a discutir con los huincas.					
54.	No he sido molestado por ser Mapuche.					
55.	Soy amable con los huincas.					
56.	Trabajo menos de 8 horas al día.					
57.	No me llevo bien con las personas Mapuches.					
58.	Los huincas no afectaron a la cultura Mapuche.					
59.	La sociedad chilena es racista contra los Mapuches.					
60.	Me junto con personas Mapuches todos los días.					
61.	Todos tienen las mismas oportunidades en Chile.					
62.	Tengo orgullo de ser Mapuche.					
63.	Me siento parte del pueblo Mapuche.					

¡Muchas gracias!

4

APPENDIX E-4 (1): Item-intercorrelation analyses in study 4.[a]

Item (facet, pole)	Item (RDQ-T)																
	2	59	63	1	8	36	58	13	39	23	57	15	28	14	52	62	21
2 (1, +)	1	.469(**)	.092	.195(**)	.139(*)	.061	.336(**)	.020	.124	.322(**)	.225(**)	.115	.100	.038	.279(**)	.247(**)	.094
59 (1, +)		1	.075	.160(*)	.166(*)	.029	.339(**)	-.070	.015	.194(**)	.242(**)	.246(**)	-.032	-.046	.135	.232(**)	.141(*)
63 (5, +)			1	.338(**)	.121	.037	.145(*)	.388(**)	.462(**)	.432(**)	.252(**)	.089	.035	.405(**)	.435(**)	.614(**)	.143
1 (5, +)				1	.048	.063	.137	.226(**)	.295(**)	.247(**)	-.003	.133	.065	.200(**)	.272(**)	.394(**)	.099
8 (13, +)					1	.333(**)	.207(**)	-.024	.026	.137	.005	.080	.003	-.086	.100	.206(**)	.127
36 (13, +)						1	-.025	-.065	-.066	.042	-.102	-.018	.042	-.155(*)	-.057	.055	.060
58 (13, -)							1	.140(*)	.164(*)	.238(**)	.041	.045	.083	.122	.233(**)	.195(**)	.162(*)
13 (26, +)								1	.720(**)	.201(**)	.174(*)	.214(**)	.172(*)	.528(**)	.452(**)	.239(**)	.016
39 (26, -)									1	.268(**)	.130	.211(**)	.180(*)	.462(**)	.551(**)	.272(**)	.061
23 (22, +)										1	.351(**)	.046	-.036	.075	.295(**)	.371(**)	.095
57 (22, -)											1	.075	-.024	.220(**)	.146(*)	.243(**)	.016
15 (21, +)												1	.211(**)	.150(*)	.188(**)	.120	.002
28 (21, -)													1	.170(*)	.194(**)	.024	.039
14 (31, +)														1	.310(**)	.287(**)	.001
52 (31, -)															1	.323(**)	.051
62 (33, +)																1	.116
21 (33, -)																	1

Item (facet, pole)	Item (RDQ-R)											
	24	43	48	7	50	9	53	55	12	38	20	45
24 (3, +)	1	.492(**)	.312(**)	.188(**)	.303(**)	.139(*)	.329(**)	.070	.279(**)	.236(**)	.353(**)	.303(**)
43 (3, +)		1	.352(**)	.152(*)	.274(**)	.222(**)	.256(**)	.175(**)	.269(**)	.183(**)	.311(**)	.263(**)
48 (8, +)			1	.283(**)	.247(**)	.153(*)	.490(**)	.305(**)	.236(**)	.224(**)	.509(**)	.573(**)
7 (8, +)				1	.265(**)	.226(**)	.203(**)	.240(**)	.216(**)	.243(**)	.249(**)	.173(**)
50 (14, -)					1	.196(**)	.266(**)	.230(**)	.064	.160(*)	.162(*)	.220(**)
9 (14, +)						1	.168(*)	.143(*)	.097	.120	.119	.126
53 (19, +)							1	.255(**)	.100	.070	.364(**)	.426(**)
55 (19, -)								1	.076	.161(*)	.234(**)	.274(**)
12 (28, +)									1	.689(**)	.313(**)	.266(**)
38 (28, -)										1	.295(**)	.297(**)
20 (35, +)											1	.548(**)
45 (35, -)												1

APPENDIX E-4 (2): Item-intercorrelation analyses in study 4.[a]

Item (facet-pole)	Item (RDQ-A) 54	47	18	6	61	29	34	56	3	33	42	60	22	37
54 (4, +)	1	.557(**)	.188(**)	.112	.382(**)	.307(**)	.058	.106	.113	.075	.122	.195(**)	.189(**)	.222(**)
47 (4, +)		1	.269(**)	.237(**)	.360(**)	.222(**)	-.056	.019	.295(**)	.234(**)	.202(**)	.265(**)	.205(**)	.258(**)
18 (7, +)			1	.135	.147(*)	.108	.062	.052	.390(**)	.276(**)	.105	.146(*)	.223(**)	.276(**)
6 (7, +)				1	.015	-.015	-.109	.048	.143(*)	.094	-.059	.024	.242(**)	.293(**)
61 (15, +)					1	.359(**)	-.040	.018	.068	.150(*)	.199(**)	.236(**)	.118	.166(*)
29 (15, -)						1	-.062	-.062	.085	.116	.212(**)	.332(**)	.026	.076
34 (24, +)							1	.601(**)	-.057	-.011	-.080	-.128	.105	.074
56 (24, -)								1	.047	.016	-.055	-.086	.110	.036
3 (23, +)									1	.281(**)	-.117	.052	.127	.234(**)
33 (23, -)										1	-.057	.142(*)	.031	.102
42 (20, +)											1	.300(**)	.108	.087
60 (20, -)												1	-.019	-.006
22 (29, +)													1	.618(**)
37 (29, -)														1

Item (facet, pole)	Item (RDQ-M) 35	17	27	19	30	49	40	4	44	46	11	26	16	32	31	51	5	41	10	25
35 (2, +)	1	.445(**)	.177(*)	.129	.223(**)	.051	-.171(*)	-.138	.051	.045	.041	.087	.133	.157(*)	.032	-.025	.190(*)	.173(*)	.008	.298(**)
17 (2, +)		1	.177(*)	.164(*)	.097	-.016	-.053	-.118	-.047	.167(*)	.017	.008	.211(**)	.171(*)	.053	-.056	.216(**)	.197(**)	.072	.211(**)
27 (6, +)			1	.312(**)	.358(**)	.067	.066	-.051	.128	-.039	.285(**)	.198(**)	.447(**)	.375(**)	.121	.090	.361(**)	.430(**)	.016	.274(**)
19 (6, +)				1	.157(*)	-.195(**)	-.123	-.033	.067	-.068	.129	.033	.468(**)	.287(**)	.056	.070	.266(**)	.321(**)	-.114	.153(*)
30 (9, +)					1	.218(**)	.083	.026	.290(**)	.082	.317(**)	.285(**)	.123	.249(**)	.207(**)	.110	.124	.203(**)	.031	.315(**)
49 (9, +)						1	.075	-.015	.217(**)	.181(**)	.247(**)	.242(**)	-.054	.000	.030	.086	.023	-.042	.192(**)	.158(*)
40 (10, +)							1	.134	.193(**)	.179(**)	.086	.066	-.008	.010	.247(**)	.148(*)	-.019	.027	.212(**)	.126
4 (10, +)								1	.137(*)	.145(*)	.056	.146(*)	.107	.033	-.042	-.021	-.002	.068	.237(**)	.067
44 (11, +)									1	.228(**)	.265(**)	.212(**)	.056	.130	.096	.097	.139	.069	.070	.188(*)
46 (11, +)										1	.186(*)	.187(**)	.026	-.048	.072	-.071	.011	.007	.157(*)	.161(*)
11 (12, +)											1	.535(**)	.159(*)	-.019	.111	-.037	.142	.067	.134	.205(**)
26 (12, +)												1	.032	.092	.196(**)	.104	.156(*)	.055	.313(**)	.305(**)
16 (16, +)													1	.353(**)	.023	-.125	.370(**)	.473(**)	-.063	.193(*)
32 (16, -)														1	.043	.086	.312(**)	.544(**)	.083	.308(**)
31 (25, +)															1	.451(**)	-.003	.038	.128	.187(*)
51 (25, -)																1	-.036	-.001	.018	.130
5 (32, +)																	1	.270(**)	.030	.143
41 (32, -)																		1	.103	.351(**)
10 (18, +)																			1	.292(**)
25 (18, -)																				1

Note: [a]Kendall's tau coefficients presented. * $p < .05$. ** $p < .01$.

APPENDIX E-5: Conversion table for RDQ-subscales in study 4. Raw scores, percentiles, and stanine values.

RDQ-T

Raw score	Percentile	Stanine
0	0.0	
…	…	
28	0.6	1
29	0.6	
30	2.2	
31	2.2	
32	2.8	
33	5.6	
34	7.3	2
35	8.4	
36	10.1	
37	13.5	3
38	16.9	
39	19.7	
40	24.2	
41	27.9	4
42	32.6	
43	36.0	
44	41.0	
45	48.3	5
46	50.0	
47	56.2	
48	59.6	
49	64.6	
50	70.8	6
51	74.2	
52	78.7	
53	82.0	7
54	86.0	
55	87.1	
56	90.4	
57	92.1	8
58	93.8	
59	94.9	
60	96.1	
61	97.2	
62	97.8	
63	98.3	9
64	99.4	
65	99.4	
66	99.4	
67	100.0	
68	100.0	

RDQ-R

Raw score	Percentile	Stanine
0	0.0	
…	…	
4	0.6	1
5	0.6	
6	1.1	
7	1.1	
8	1.7	
9	2.2	
10	3.4	
11	5.1	2
12	8.4	
13	9.0	
14	11.8	3
15	18.5	
16	25.8	
17	30.9	4
18	35.4	
19	36.0	
20	40.4	
21	46.1	5
22	48.9	
23	51.1	
24	56.7	
25	61.2	
26	66.9	6
27	69.7	
28	74.7	
29	78.7	
30	79.2	7
31	81.5	
32	87.1	
33	87.1	
34	89.9	
35	91.0	8
36	93.3	
37	93.3	
38	94.4	
39	96.1	
40	97.2	
41	98.3	
42	98.9	9
43	98.9	
44	99.4	
45	99.4	
46	99.4	
47	100.0	
48	100.0	

RDQ-A

Raw score	Percentile	Stanine
0	0.0	
…	…	
10	0.6	1
11	1.1	
12	1.7	
13	2.2	
14	2.8	
15	6.2	2
16	6.7	
17	9.6	
18	11.8	
19	14.0	3
20	17.4	
21	19.1	
22	23.6	
23	27.0	4
24	30.3	
25	38.8	
26	41.6	
27	47.8	
28	54.5	5
29	57.9	
30	66.3	
31	68.5	
32	71.9	6
33	75.8	
34	82.0	
35	85.4	7
36	89.9	
37	91.0	
38	93.3	8
39	95.5	
40	97.2	
41	98.3	
42	98.9	9
43	100.0	
…	…	
56	100.0	

RDQ-M

Raw score	Percentile	Stanine
0	0.0	
…	…	
3	1.1	
4	2.8	1
5	2.8	
6	5.6	
7	9.0	2
8	12.9	
9	16.3	
10	19.7	3
11	28.7	
12	34.3	
13	37.6	4
14	42.1	
15	46.1	
16	52.2	5
17	57.9	
18	62.9	
19	66.3	
20	70.2	6
21	73.6	
22	78.1	
23	83.1	
24	87.6	7
25	87.6	
26	90.4	
27	92.1	
28	93.8	8
29	95.5	
30	96.1	
31	97.2	
32	97.8	
33	98.3	
34	98.3	
35	98.3	9
36	99.4	
…	…	
45	100.0	
…	…	
80	100.0	

APPENDIX E-6: Item bias analysis in cross-cultural comparison of study 3 and study 4.[a]

Item	Factor	*df*	*F*	η^2
1	Culture	1	6.80* (3.30)	.023
	Group	2	14.97** (7.26)	.092
	CxG	2	.70 (.34)	.005
2	Culture	1	2.39 (2.39)	.008
	Group	2	10.96** (10.96)	.070
	CxG	2	1.12 (.96)	.008
3	Culture	1	.85 (.77)	.003
	Group	2	21.67** (19.58)	.128
	CxG	2	3.04* (2.74)	.020
4	Culture	1	2.04 (2.88)	.007
	Group	2	23.29** (32.84)	.138
	CxG	2	3.60* (5.07)	.024
5	Culture	1	5.27 (4.87)	.018
	Group	2	19.77** (18.29)	.118
	CxG	2	5.20* (4.81)	.032
6	Culture	1	.75 (.77)	.003
	Group	2	8.99** (9.16)	.057
	CxG	2	.37 (.37)	.002
7	Culture	1	27.91** (34.79)	.087
	Group	2	42.11** (52.50)	.223
	CxG	2	2.44 (3.05)	.016
8	Culture	1	.27 (.47)	.001
	Group	2	7.24** (12.35)	.047
	CxG	2	.34 (.58)	.002
9	Culture	1	1.16 (1.54)	.004
	Group	2	16.22** (21.46)	.098
	CxG	2	.41 (.55)	.003
10	Culture	1	6.45* (10.31)	.022
	Group	2	16.38 (26.18)	.101
	CxG	2	.14 (.22)	.001
11	Culture	1	16.09** (18.14)	.052
	Group	2	50.57** (57.02)	.256
	CxG	2	4.36* (4.91)	.029
12	Culture	1	.08 (.17)	.000
	Group	2	52.92** (108.21)	.263
	CxG	2	.81 (1.65)	.005
13	Culture	1	2.04 (3.88)	.007
	Group	2	46.45** (88.44)	.242
	CxG	2	.45 (.86)	.003
14	Culture	1	29.06** (45.99)	.090
	Group	2	36.70** (58.08)	.200
	CxG	2	.19 (.30)	.001
15	Culture	1	18.49** (26.63)	.059
	Group	2	17.14** (24.69)	.103
	CxG	2	.73 (1.05)	.005
16	Culture	1	3.68 (2.92)	.012
	Group	2	16.15** (12.83)	.099
	CxG	2	5.52* (4.38)	.036
17	Culture	1	.20 (.25)	.001
	Group	2	11.47** (14.48)	.072
	CxG	2	1.13 (1.43)	.008
18	Culture	1	3.25 (3.87)	.011
	Group	2	22.95** (27.35)	.135
	CxG	2	.14 (.17)	.001
19	Culture	1	.00 (25.42)	.000
	Group	2	19.06** (7.44)	.114
	CxG	2	5.58* (1.33)	.036
20	Culture	1	12.96** (14.08)	.042
	Group	2	85.05** (92.46)	.367
	CxG	2	1.92 (2.09)	.013
21	Culture	1	.27 (.57)	.001
	Group	2	7.65** (14.36)	.049
	CxG	2	.79 (1.48)	.005
22	Culture	1	9.66* (14.60)	.032
	Group	2	30.65** (46.29)	.174
	CxG	2	1.46 (2.20)	.010
23	Culture	1	10.43** (3.69)	.034
	Group	2	17.95** (6.35)	.108
	CxG	2	3.12* (1.10)	.023
24	Culture	1	9.95* (14.24)	.033
	Group	2	54.67** (78.22)	.271
	CxG	2	1.98 (2.84)	.013
25	Culture	1	2.49 (1.10)	.008
	Group	2	8.34** (3.68)	.053
	CxG	2	3.50* (1.55)	.023
26	Culture	1	10.80** (14.15)	.035
	Group	2	45.73** (59.88)	.237
	CxG	2	2.91 (3.81)	.019
27	Culture	1	3.69 (2.96)	.012
	Group	2	27.15** (21.72)	.055
	CxG	2	1.45 (1.16)	.010
28	Culture	1	29.06** (45.99)	.090
	Group	2	36.70** (58.08)	.200
	CxG	2	.19 (.30)	.001
29	Culture	1	1.18 (1.69)	.004
	Group	2	20.80** (29.74)	.124
	CxG	2	.71 (1.02)	.005
30	Culture	1	1.17 (1.82)	.004
	Group	2	31.81** (49.46)	.180
	CxG	2	.53 (.82)	.004
31	Culture	1	34.29** (39.24)	.104
	Group	2	33.38** (38.20)	.185
	CxG	2	8.20** (9.38)	.053
32	Culture	1	.32 (.11)	.001
	Group	2	14.24** (4.93)	.087
	CxG	2	.26 (.09)	.002
33	Culture	1	2.04 (3.04)	.007
	Group	2	11.52** (17.17)	.072
	CxG	2	1.05 (1.57)	.007
34	Culture	1	2.84 (6.90)	.010
	Group	2	12.08** (29.38)	.077
	CxG	2	.17 (.41)	.001
35	Culture	1	2.95 (3.15)	.010
	Group	2	6.02** (6.43)	.039
	CxG	2	.83 (.88)	.060
36	Culture	1	.23 (.47)	.001
	Group	2	2.27 (4.67)	.015
	CxG	2	1.50 (3.08)	.010
37	Culture	1	.62 (1.04)	.002
	Group	2	31.93** (53.68)	.180
	CxG	2	.80 (1.34)	.005
38	Culture	1	6.75* (14.05)	.023
	Group	2	36.92** (76.86)	.201
	CxG	2	1.95 (4.06)	.013
39	Culture	1	7.76* (12.06)	.026
	Group	2	54.66** (84.87)	.273
	CxG	2	1.63 (2.57)	.011
40	Culture	1	2.95 (4.82)	.010
	Group	2	16.70** (27.26)	.109
	CxG	2	1.35 (2.20)	.009
41	Culture	1	.17 (.08)	.001
	Group	2	6.46** (3.04)	.042
	CxG	2	.28 (.13)	.002
42	Culture	1	18.13** (16.40)	.058
	Group	2	.51 (.46)	.003
	CxG	2	1.20 (1.09)	.008
43	Culture	1	2.27 (3.76)	.008
	Group	2	39.70** (65.63)	.213
	CxG	2	.02 (.03)	.000
44	Culture	1	2.48 (2.56)	.009
	Group	2	37.82** (39.07)	.208
	CxG	2	4.02* (4.15)	.027
45	Culture	1	7.90* (8.03)	.026
	Group	2	55.52**(56.32)	.276
	CxG	2	1.22 (1.24)	.008
46	Culture	1	1.41 (1.97)	.005
	Group	2	18.44** (25.78)	.115
	CxG	2	.42 (.59)	.003
47	Culture	1	.66 (1.02)	.002
	Group	2	51.07** (79.81)	.258
	CxG	2	.41 (.65)	.003
48	Culture	1	12.02** (13.48)	.039
	Group	2	74.42** (83.47)	.335
	CxG	2	.55 (.62)	.004
49	Culture	1	2.46 (3.77)	.008
	Group	2	36.23** (55.53)	.200
	CxG	2	1.49 (2.28)	.010
50	Culture	1	3.21 (4.95)	.011
	Group	2	10.95** (16.89)	.069
	CxG	2	1.88 (2.90)	.013
51	Culture	1	3.29 (7.45)	.011
	Group	2	12.91** (29.28)	.080
	CxG	2	1.99 (4.51)	.013
52	Culture	1	35.38** (36.84)	.107
	Group	2	53.24** (55.44)	.265
	CxG	2	9.80** (10.21)	.062
53	Culture	1	1.85 (2.39)	.006
	Group	2	53.11** (68.63)	.265
	CxG	2	.92 (1.18)	.006
54	Culture	1	2.85 (5.08)	.010
	Group	2	27.79** (49.67)	.159
	CxG	2	2.81 (5.02)	.019
55	Culture	1	.00 (.00)	.000
	Group	2	20.36** (18.17)	.121
	CxG	2	1.89 (1.69)	.013
56	Culture	1	3.35 (7.26)	.011
	Group	2	14.68** (31.82)	.091
	CxG	2	1.78 (3.86)	.012
57	Culture	1	1.58 (1.77)	.005
	Group	2	3.61* (4.05)	.024
	CxG	2	2.31 (2.60)	.015
58	Culture	1	8.20 (15.19)	.053
	Group	2	11.22 (20.79)*	.037
	CxG	2	.89 (1.65)	.006
59	Culture	1	.39 (.48)	.001
	Group	2	20.72** (25.19)	.124
	CxG	2	.19 (.23)	.001
60	Culture	1	12.98** (13.91)	.042
	Group	2	15.40** (16.51)	.095
	CxG	2	4.00* (4.28)	.026
61	Culture	1	9.47* (15.48)	.031
	Group	2	42.19** (68.98)	.222
	CxG	2	1.25 (2.04)	.008
62	Culture	1	10.19* (3.15)	.033
	Group	2	14.39** (4.45)	.089
	CxG	2	5.06* (1.56)	.033
63	Culture	1	6.37* (2.60)	.021
	Group	2	30.16** (12.31)	.169
	CxG	2	2.87 (1.17)	.019

Note .[a] *D*egrees of freedom (*df*), F-value (*F*), and effect size eta^2 (η^2) of the factors culture and group presented. Values in parentheses represent mean square errors. * $p < .05$. ** $p < .01$.