ISCTE ◈ IUL
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Department of Social and Organizational Psychology

EFFECTS OF POSITIVE PHYSICAL IMAGINED CONTACT IN A SPANISH SAMPLE

Miguel Ángel López González

Dissertation submitted as partial requirement for the conferral of

Master in Psychology of Intercultural Relations

Supervisor:
PhD. Mauro Bianchi, invited assistant teacher,
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Resumo

O conflito intergrupal tem estado presente desde o começo da civilização. As lutas por territórios ou poder e a discriminação dos outros são uma constante na nossa historia. Desde diversos campos tem sido demostrado como as fronteiras entre os grupos e culturas e o estilo competitivo de muitas de estas relações assentam as bases para o surgimento do conflito, sendo sus efeitos ainda mais óbvios devido aos processos de globalização. Por esta razão, a redução do preconceito e da discriminação tem sido um uma preocupação central para a Psicologia Intercultural, a qual, deve encarregar-se de criar ferramentas encaminhadas a este objetivo. Este trabalho remarca a utilidade de uma das técnicas mais promissoras de este campo, o contato imaginado, baseado na Teoria do Contato Intergrupal (Brown & Hewstone, 2005; Pettigrew, 1998). Esta técnica permite a redução das atitudes implícitas negativas faz aos exo-grupos, utilizando a imaginação de interações individuais com membros de outros grupos. Em este experimento é testada uma variante de este tipo de contato, o contato físico imaginado, assim como trata de demostrar a existência de uma melhora na redução do preconceito no nível das atitudes implícitas quando o contato físico imaginado é percebido como positivo. Os resultados não puderam suportar estatisticamente esta hipóteses. Discutimos estes resultados e as possibilidades no desenvolvimento de melhoras para esta útil ferramenta.

Keywords: CONTATO INTERGRUPAL, CONTATO IMAGINADO, CONTATO FÍSICO, ATITUDES IMPLÍCITAS

Abstract

Intergroup conflict has been present since the beginning of humankind. The fights for territories or power and the discrimination of the other seems a constant in our History. From several fields, it is have shown how the boundaries between groups and cultures and the competitive style of many of these relations set the basis for the emergence of conflict, being each day more obvious due to the Globalisation processes. For this reason, the reduction of prejudice and discrimination has been a main objective for the Intercultural Psychology, which, must create tools for this purpose. This work emphasise the usefulness of one of the most promising tools on this field, the imagined contact, grounded in Intergroup Contact Theory (Brown & Hewstone, 2005; Pettigrew, 1998). This technique allows the reduction of implicit negative attitudes toward outgroups using the imagination of individual interactions with members of an outgroup. In this experiment, it is tested a variant of this kind of contact, the physical imagined contact, as well as we try to demonstrate the existence of an improvement in prejudice reduction, at levels of implicit attitudes, when an imagined positive physical contact is given. The findings could not support statically our hypothesis. We discuss the implications of these results and the possibilities in the development of improvements for this useful tool.

Keywords: INTERGROUP CONTACT, IMAGINED CONTACT, PHYSICAL CONTACT, IMPLICIT ATTITUDES

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Effects of positive physical imagined contact in a Spanish sample

Intergroup conflict has been present since the very beginning of human civilization. Disputes over territories, resources, power, or influence have proved to be a constant in our History. Along with the formation of human groups, it emerges a constant struggle to achieve identity and differentiation, whose more obvious appearance is the diversity among the cultures that have inhabited the Earth for thousands of years; the wide range of religions, languages, traditions and habits are a reflect of this incessant evolution in what refers to the differentiation process between groups. We can observe, even since old times, tales where this tendency is expressed: passages from many religions' sacred books where we can see factions or tribes descendant from a common ancestor (e.g. the Old Testament or Hindi epopees) in a way that humanity is divided into several classes and strata related to each other but differentiated by a divergent history. Although these facts could seem a pessimist plea or a hymn to war and segregation, by any means it is not the intention of this work to deliver such an impression. On the contrary, this thesis relies on the belief that cultural richness and diversity is one of the best instances of human knowledge and development; a continuum of cultural evolution marked by nature itself in its origins and by societies' development in following times. Such societies are not exempt from conflicts, resulting from a bad comprehension between the various social groups, the instrumental utilisation of these differences by historical needs or the biased, self-interested use of certain narratives. On the other hand, we simply cannot deny the importance of psychological processes inherent to humanity itself which, being social animals as we are, leads us to categorize individuals into groups, as stated by Tajfel and Turner (1986) in their Social Identity Theory.

Nowadays, we can observe a world where interconnection on every level rapidly increases. This process comes from diverse historical outlooks such as expansionist and colonialist policies from past centuries or the evolution of means of transport, as well as the own Globalisation in which people are immersed. These features turn intergroup and intercultural contact frequent and common rather than exceptional. In such complex nowadays societies, where immediacy and necessity join, it is the challenge of the present century to give response to dispute between groups and improve understanding among cultures.

As Crisp, Stathi, Turner, and Husnu (2009) well explain, the UNESCO 1947 Universal Declaration "since wars begin in the minds of men, it is in the minds of men that the defences of peace must be constructed" is one of the most cited and meaningful ones in the field of Social Psychology; to find the tools needed to reduce conflict and prejudice must be our main goal. Comprehension of the decisive processes of social conflict, prejudice, and discrimination becomes a main topic; finding the tools to reduce them grows into a necessity. Group, ethnic or national identity has important functional, individual features linked to self-esteem and guarantees a collective identity –the value of the "imagined community" of the nation (Anderson, 1983). In other words, group identity awards a significant structure of affective meaning to individuals (Anderson, 1983). The practice of belonging and learning since early ages has a key importance in people development; in the words of Alwin, Cohen, and Newcomb (1991): "Attitudes socialized early in life, in turn, significantly shape social benefits in attitudes later in life".

The aim of this thesis is to further develop and validate one of the tools to reduce prejudice: positive imagined physical contact. Grounded in the Contact Theory by Allport (1954) and following the evolution of the different applications of contact (physical, extended and imagined) as well as later studies in this field, this thesis investigate the validity of this new tool in the reduction of implicit negative attitudes between distinct social groups. Implicit attitudes are defined as "introspectively unidentified (or inaccurately identified) traces of past experience that mediate favorable or un-favorable feeling, thought, or action toward social objects" (Greenwald & Banaji, 1995). This axiom being understood, previous investigations –as the paper on political psychology by Sheets, Domke, and Greenwald (in press) – have proven that implicit attitudes, as well as explicit ones, bear a vast predictive validity (Greenwald, Pochlman, Uhlmann, & Baraji, 2009). Nonetheless, implicit attitudes are especially predictive where the investigations focus on socially sensitive topics, as interracial or intergroup attitudes (Greenwald et al., 2009).

First, the development of these theories' over the last century is introduced in Chapters I to III. Second, a definition of the various kinds of contact, pointing out possible advantages and disadvantages of these techniques, is presented in Chapters IV to VI. Third, Chapter VII include an experimental study to test the effectiveness in reducing negative attitudes of the tool under investigation: positive imagined physical contact. Finally, results are discussed and interpreted in Chapter VIII.

State of Art

Chapter I: Conflict

As described in the introduction of this paper, intergroup conflict is one of the biggest issues Social and Intercultural Psychology faces nowadays. In a globalized world where the increase of the number of contact is becoming usual, it is more and more necessary to develop theories and interventions that allow us to improve tolerance, communication, and cooperation among groups. Conflict itself lies in the own nature of groups: the existence of differences such as countries, nationalities, ethnicities, cultures, or religions, along with the need of coexistence and interactions between communities, can/may lead to the outbreak of conflict (Greenland & Brown, 2005). However, what exactly is conflict?

Conflict has been a matter of study by diverse fields of knowledge, from humanist philosophy to economic theory. The terms struggle, inequality and scarcity always appear linked to that concept. To focus our debate, a more social (and sociological) vision on conflict will be used: the one published by Coser (1956), which understands it as a "fight over values and status, power and scarce resources, in the course of which the opponents wish to neutralise, damage or eliminate their rivals". Thus, a conflict between individuals becomes a group or a social conflict when it transcends and affects the own community structure. Based on this concept, the second question would be how conflict begins.

As stated in the Social Identity Theory (SIT) (Tajfel & Turner, 1986), human being need to categorise the world around us. This categorisation exists in the form of two main concepts: "those who are like me" (Ingroup) and "the others, those who are not like me" (Outgroup). This simple differentiation of social reality makes an individual's identity to be shaped by the belonging and identification with the reference group, thus creating a (partially, as we will see from here on out) exclusive border from what is different. The SIT indicates individuals identify themselves in a double way, "maximising positive distinction" through the classification in a social identity (which answers to "who we are") and awarding a self-esteem – given that self-esteem is also a potential drive for competition. People want to be part of social groups that are valued as "positive" because they want to achieve and maintain positive concept about themselves- that would be based on

similarity to others (the group makes us feel better with ourselves). This process divides the world into belonging groups and it is the seed from which intergroup conflict blossoms.

Following, other lines of research in Social Psychology present the importance of the Social Projection Theory (Robbins & Krueger, 2005) according to which people tend to expect similarities between them and the members of their groups. Specifically, the authors proved that social projection is stronger (the individuals expect bigger similarities) when focused on the Ingroup rather than the Outgroup, this contributing to the favouritism of the belonging group and the increase of homogeneity perception towards said group. This process would explain the creation of intergroup borders, along with the False-consensus Effect (Rose, Greene, & House, 1977). This attribute bias explains how people tend to overestimate the extent of their opinions, beliefs, preferences, values, and habits in other people from their group, leading this person to perceive that these beliefs are the norm. This way, differences between groups are maximised and seem to be exclusive and selective and the necessary structures for the outbreak of the conflict are developed. Finally, it is important to highlight that humans create these belonging groups easily. In this sense, it is crucial to refer to the Minimal Group Paradigm (Tajfel, Billing, Bundy, & Flament, 1971), according to which the sole inclusion of a person in a randomly given group (through division of the participants in the experiment with minimal differentiation as shirt colour or, even more randomly, a coin toss) provokes the effects or intergroup favouritism. These effects can be observed in multiple social situations as highlighted in Crisp & Turner (2009):

"In the United States, for example, segregation of Latino and White communities remains pervasive (Martin, 2006), and the average White person lives in a predominantly White neighbourhood with less than 10% Black residents (Logan, 2001). Many Catholic and Protestant communities in Belfast, Northern Ireland, include a very low percentage of residents from the other community, and only 5% of Northern Irish children attend mixed Catholic–Protestant schools (Office for National Statistics, 2001). There are many other examples of more extreme segregation, from the Green Line in Cyprus to the West Bank Wall in Israel (Pettigrew, 2008)"

This list of examples goes on even in most recent times, when we can see how Syrian war (which has led to the displacement of millions of civils and a humanitarian crisis unmatched in recent history), initiated by differences between Al Assad government and rebel guerrilla warfare

along with Western interests on the region, has become a jigsaw of various factions and ideologies (ISIS-Daesh, Al-Nusrah Front, Army of Conquest, Kurdish Forces, Pro-government Forces, Western Alliance, etc.) based on demonisation of the outgroup and the lacking understanding among communities and thus provoking a domino effect in Europe and asylum providing countries, due to fear and stereotyping of these immigrants by the governments, with a distant solution to all this. We can add to this list the Brexit process (exit of the United Kingdom from the European Union), triggered by UKIP's xenophobic, anti-immigration discourse, or the increase of right-winged populisms in Europe (Golden Dawn in Greece, National Front in France, etc.), with a message based on the distinction between "us" –European and developed– and "the others" – Muslim, terrorists and fundamentalists that want to end "our" civilisation. All these cases are a direct reflect of the conflict's existence, a clash of civilization (Huntington, 1996) where tensions among groups and countries grow more and more around concepts such as nation, religion, race or ethnicity, and show people's tendency to display the Outgroup Homogeneity Effect (Quattrone & Jones, 1980), that is, the tendency to perceive members of the Outgroup as much more homogeneous (and, generally, in more negative terms) than our own group. However, as pointed out in the introduction, it would be a mistake to stick with this pessimistic version of social reality. From Social Psychology, various standpoints have marked, by means of diverse theories, that conflict can be reduced and even neutralised, and this must be our main target. In a more specific way, Amir (1987) summarises that conflict and prejudice reduction are at the core of the Intergroup Contact Theory (Brown & Hewstone, 2005, Pettigrew, 1998). According to this theory, ethic and intergroup conflicts act as a basis for discrimination, from which we can infer that its reduction needs to be a priority for Social Psychology. To achieve this reduction, intergroup contact is one of the most promising techniques in Social Sciences; nevertheless, it is necessary to take into consideration essential and context-depending conditions to accomplish this goal. Sadly, many of the situations that occur in real life do not obey these ideal conditions; thus, we must create the specific circumstances that, with control of the technique, will allow the attainment of positive changes. Hence, it becomes mandatory to define beforehand the goals and outcomes that we wish to obtain, as different goals will require different inputs. Likewise, interventions have to be contextual: which is valid for a culture might not be appropriate for another one, so dangers derived from generalisation of results need to be controlled. Therefore, the development of some interventions might be more demanding, this being due to economic or time issues; it relates to the

target group and to its own organisation. In spite of these difficulties, resolving these problems has to be more constructive and positive than ignoring reality or treating it in a superficial way. That is why it is imperative to focus the efforts on the development and application of these practices, as the faster the intervention in the conflict, the better the result and fewer its limitations.

Based on this idea, it is strongly believed that the key to reduce conflict, which emerges from prejudice towards the different, must be built through intergroup contact. To achieve this, special emphasis was put on the works by Gordon Allport in 1954, which set the bases of his Contact Hypothesis in his book The Nature of Prejudice. In the following section, the main contributions of this hypothesis and its practical applications in reducing implicit negative attitudes among groups will be explained.

Chapter II: Contact hypothesis

The base idea around which Contact Hypothesis (Allport, 1954) is that in order to reduce prejudice we must put the various groups in contact under adequate circumstances (Crisp, Stathi, Turner, & Husnu, 2008). In a more specific way, the main premise of this theory states that, under adequate conditions of interpersonal contact, prejudice (along with stereotyping and discrimination) experiment a reduction that leads to a better relationship between said groups. Using a meta-analysis on over 500 studies, Pettigrew and Tropp (2006) proved the validity of this theory, showing that: "There is a fundamental, robust, and positive impact of contact on intergroup attitudes regardless of target group, age group, geographical area, or contact setting." (Crisp et al., 2008). Next question would be, consequently, how this reduction takes place and which conditions are adequate for the desired effect to be observed.

Conditions vs facilitating factors

On his first theoretical formulation, Allport (1954) remarked the need of 4 conditions (Equal Status, Common Goals, Intergroup Cooperation and Institutional Support) for intergroup contact to be positive and entail a reduction of negative attitudes. Taking Pettigrew's conceptualisation (1998) as a starting point, these conditions are:

• EQUAL STATUS: Allport stresses the importance of perception by both groups of a status equality inside the situation (Cohen & Lotan, 1995). Although it is a concept with a difficult definition, status equality must refer to the feeling experienced by the individuals of being in a situation in which both parts are equally represented, with absent threat to their identity;

• COMMON GOALS: Against a perspective of competition for resources, as we saw in the introduction. The ideal condition for reducing prejudice has its basis, partly, in the search of common goals by the involved parts, so that both groups need each other to accomplish the expected result;

• INTERGROUP COOPERATION: Directly linked to the previous condition, searching for common goals require cooperation strategies and interdependent efforts in the absence of competition (Bettencourt et al., 1992);

• INSTITUTIONAL SUPPORT: Support from institutional framework (law, authority, etc.) creates this condition. If authority facilitates contact by establishing acceptation rules, situation-stressing factors are reduced, leading this to a better interaction.

These conditions were understood as necessary and sufficient for intergroup contact to reduce prejudice and negative attitudes. Some criticisms were made against the idea of intergroup contact, alleging from the perspective of different papers (Brooks, 1975; Levinger, 1985) that contact has the possibility to create hostility and conflict instead of reducing it, or that the reduction was due to different effects, thus suggesting that the investigation in "contact research has been rather unsophisticated and lacking in rigor" (McClendon, 1974). Notwithstanding, these results are mainly due to a biased vision of the outcomes, along with a reduced election of the literature (Pettigrew, 1998). In this sense, it is relevant to highlight the value of intergroup anxiety, being this understood as the "feelings of threat and uncertainty that people experience in inter-group contexts" (Pettigrew, 1998), that is, the rejection by individuals to events that involve contact with

different groups due to thoughts about how they should act, how they will be perceived by the others and whether they will or will not be accepted (Stephan & Stephan, 1985). People tend to avoid situations of uncertainty or ignorance about the others, as in the case of intergroup meetings. In other words, as can be seen in Pettigrew (1998): "Contact and perceived social climate tend to reinforce each other when their influence operates in the same direction, and to cancel each other when the influence works on the opposite direction" (Wilner, Walkley, & Cook, 1955)

On the other hand, intergroup friendship seems to be another factor to be taken into consideration as highly effective at promoting positive attitudes among groups (Turner, Hewstone, Voci, Paolini, & Christ, 2007), as it generally includes cooperation and common goals, as well as equal status (Pettigrew, 1997).

Therefore, the next step was to validate the established conditions and to confirm their "necessity". To do that, a meta-analytic study of over 500 papers was done by Pettigrew and Tropp (2006), demonstrating not only that intergroup contact generally reduces prejudice towards the Outgroup but also that the optimal conditions stated by Allport are nor mandatory for this reduction to be achieved. Allport's conditions (1954) behave more like "facilitating conditions" (Crisp et al., 2008; Pettigrew & Tropp, 2006), functioning more as intertwined value rather than as independent factors and accomplishing a better prejudice reduction. In this sense, the investigation led by Cameron, Rutland, Turner, Holman-Nicolas, and Powell (2011) about contact between disabled children suggests that age could be added to the aforementioned factors; the younger the individual, the less stabilised their relationships and prejudices (Dunn, 2004), which allows a greater positive effect when having contact with other groups. This work and others indicate that the use of intergroup contact does not limit itself to racial conflict, but it can be adapted to diverse kinds of groups and "settings". In other words: "There is a fundamental, robust, and positive impact of contact on intergroup attitudes regardless of target group, age group, geographical area, or contact setting." (Crisp et al., 2008).

In the following passages, the development of the Intergroup Contact Theory (Brown & Hewstone, 2005; Pettigrew, 1998), the kinds of contact that may exist and their applicability will be extended.

Chapter III: Intergroup Contact Theory

As stated, Contact Hypothesis (Allport, 1954) and Intergroup Contact Theory (Brown & Hewstone, 2005; Pettigrew, 1998) and their application as tool have been spreading as a usual practice in the field of Social Psychology. Starting from the fact that contact can reduce intergroup prejudice, many studies have been carried out, once again confirming its power. In this sense, it is possible to identify a wide variety of papers that show that mere contact between groups is enough for prejudice reduction, not even existing Allport's optimal conditions (1954). Investigation has confirmed that contact can reduce threat and intergroup anxiety feelings on future intergroup contacts (Blair, Park, & Bachelor, 2003; Islam & Hewstone, 1993); the bigger the number of positive contacts with outgroup members, the bigger the reduction of intergroup anxiety and the better the results.

Following the lines of Pettigrew and Tropp (2006), who define intergroup contact as "actual face-to-face interaction between members of clearly defined groups", the applicability of the Contact Theory is well documented: the meta-analytic studies on intergroup contact (Pettigrew & Tropp, 2006) show that the more (and better) the intergroup contact (facilitating conditions), the greater the reduction of prejudice, as well as that these effects are generalised beyond the contact situation. The attitudes towards the individuals which the contact was maintained with improve, along with the attitudes towards the whole outgroup, other outgroups and in diverse situations.

Up to this point, the theoretical bases on the Intergroup Contact Theory have been settled; in the next sections, the possible ways of contacts (real physical contact, extended contact, imagined contact and, as a part of it, imagined physical contact) and their advantages and disadvantages will be brought into detail.

Chapter IV: Kinds of *in situ* Contact

Real (actual) Contact:

Advancing on the development of the Intergroup Contact Theory (Brown & Hewstone, 2005; Pettigrew, 1998), various authors have tried its applicability on experimental studies. As stated, the simple fact that members of different groups have contact causes prejudice reduction. A wide range of procedures and investigation has been carried out in different backgrounds and social needs such as racial segregation in schools (Pattigrew, 1971), ethnopolitical conflicts (Chirot & Seligman, 2001), perception of homosexuality or education on disabled children (Harper & Wacker, 1985).

A special kind of contact, directly related to our study, is the interpersonal touch. Given that, Seger, Smith, Percy, and Conrey (2014) centre their investigation on the importance of interpersonal touch. According to these authors, "A brief, casual interpersonal touch results in positive behaviour toward the toucher, presumably because touch is a cue to friendship. Research on intergroup contact shows that feelings of friendship toward an individual outgroup member reduce prejudice toward that entire group", this reduction is achieved on an implicit level. Likewise, the study shows that the touch's effects occur even when unconsciously (Fisher, Rytting, & Heslin, 1976), leading to the previously suggested idea that mere contact between groups cause prejudice reduction.

Interpersonal touch is a sign of identity of close relationship (Monsour, 1992), by displaying a confidence and equality nexus among individuals. This fact can easily be linked to the concept of relations of Communal Sharing (Fiske, 1992, 2004), which can be seen on practically every culture. Thus, the other person is treated as an extension of oneself, sharing a membership inside the group and involving a mental representation of unity (Aron, Aron, Tudor, & Nelson, 1991). Resuming, interpersonal touch increases positivism and confidence among the "touched", this strengthening the feeling of unity. With their experiment, Seger et al. (2014) proved that a brief touch by an African American reduced the participants' prejudice towards African Americans, this affecting the implicit evaluations.

To summarise, a brief touch between members from different groups leads to a reduction of the implicit attitudes not only among individuals but also towards the belonging group, corroborating one again the results of Pettigrew and Tropp (2006). Moreover, the effect is similar either when the participants remembered having being touched or when they did not. Finally, reduction takes place at an implicit level, stating (as well as other investigations) that implicit and explicit prejudice are influenced by different processes (Turner, Hewstone, & Voci, 2007).

Until this point, it all seems to indicate that intergroup physical contact is an optimal tool in procedures of prejudice reduction. However, there is a limiting factor: it requires the possibility of contact; unfortunately, there are several cases where this possibility does not exist. As explained in the introduction, nowadays many of the intercultural conflict cases occur in situations where either the segregation between communities, the tendency to interact mainly with those who we consider similar in age, race or gender (Graham & Cohen, 1997) or the mistrust and conflict which already existed (even in intercultural environments) make it impossible for these encounters to take place. With these features, intergroup contact intervention is highly difficult to achieve. Ironically, it is in these kinds of encounters where the intervention is mostly needed. As a solution to this great disadvantage, a new contact version was developed: Extended Contact (Wright, Aron, McLaughlin-Volpe, & Ropp, 1997), which we will analyse in the next section.

Extended Contact

Once the main problem of intergroup physical contact, the absence of contact opportunity, was demonstrated, it was mandatory to find an alternative application way for the Intergroup Contact Theory (Brown & Hewstone, 2005; Pettigrew, 1998). In this context, the Extended Contact Hypothesis (Wright et al., 1997) emerges, proposing that mere knowledge and observation - vicar learning- about a member of our group having a close relationship with a member from another group will lead to an improvement of the attitude towards that other group.

In a more specific way, extended contact has its base on three main mechanisms: the existence of a positive Ingroup member (salient), a positive Outgroup member and the inclusion of the Other into the Self (Wright et al., 1997). The observation of an individual from our group engaging positive contact with a member from the outgroup entails specific aspects of referent

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information influence (Turner, 1991). Thus, the observer identifies himself with the member of their group, managing to escape from the influence of the group rules (Pettigrew, 1991).

Besides, two facilitating facts take place; first, anxiety reduction (Stephan & Stephan, 1985), given that the observation of a member of our group in contact with a member from the outgroup would reduce the levels of intergroup anxiety. Second, ignorance reduction, as, after the encounter, the member from our group could provide information about the outgroup; the lack of knowledge about the 'Other' can lead to incomprehension, bad interpretations and fear of interaction (Triandis, 1972). In other words: "In an observed in-group-out-group friendship, the in-group member is part of the self, the out-group member is part of that in-group member's self, and hence part of myself. Presuming that the out-group member's group membership is part of what one has included of that out-group member in myself, then to some extent the out-group is part of myself." (Wright et al., 1997) or, putting it in a much simpler way, 'the friend of my friend is my friend'.

This method's advantages can be especially useful when there is no opportunity for the individual of direct contact with members of the other group. Nonetheless, there are two disadvantages related to this procedure: on the one hand, the fact of it being indirect contact makes the results weaker than in the case of direct contact (Wright et al., 1997). On the other hand, we face a similar problem to the one about direct contact: in many cases, there is no possibility of having acquaintances with intergroup contact either; thus, there is no possibility of extended contact. However, as it seems that the vision of contact is enough to extend the benefits of real contact, will it be possible that the mere imagination of the contact has the same benefits?

Chapter V: Imagined Contact

The power of imagination

Once Wright et al. (1997) demonstrated that intergroup contact does not need to be direct to obtain positive outcomes as their intervention invoked some basic element of the contact experience (in their case, the reduced anxiety, psychological closeness and positive behavioural norms that can characterize contact with outgroups (Stathi & Crisp, 2008) and along with the

limitations caused by the absence of contact opportunity in the aforementioned detailed processes, imagined contact (Crisp & Turner, 2009) comes out as a solution to these disadvantages. According to these same authors: "Encouraging people to mentally simulate a positive intergroup encounter leads to improved outgroup attitudes and reduced stereotyping. It curtails intergroup anxiety and extends the attribution of perceivers' positive traits to others", that is, the mere imagination of intergroup interactions leads to the same result of prejudice reduction as in the case these interactions were real.

However, before getting into details on the imagined contact technique, we must comprehend the importance of mental imagery in Social Psychology.

Mental Imagery

As we can see in Crisp & Turner (2009): "the incredible capacity of imagination has enchanted psychologists since the very first moments" (Galton, 1993; James, 1890). The importance of imagination has been shown in various investigations, founding that it elicits motivational and emotional responses akin to the ones that would trigger in a real situation (Dadds, Bovbjerg, Redd, & Cutmore, 1997). Similarly, modern techniques in neurosciences and neuropsychology show that cortical areas, as well as memory, emotion and motor control mechanisms are activated in an imagined encounter in the same way as in a real one (Kosslyn, Ganis, & Thompson, 2001). Crisp et al. (2008) also state the fact that, functionally, mental imagery plays an important role in selecting, planning, evaluating, preparing and planning behaviours oriented to goal (Marks, 1999). In other words, the simple fact of imagining being in a situation causes the same effect as if the experience was real. This fact can be observed in different studies such as the one conducted by Blair, Ma, and Lenton (2001), where participants were asked to imagine a neutral or counterstereotypical situation (Crisp & Turner, 2009) or in the studies of Garcia, Weaver, Moskowitz, and Darley (2002) about the bystander apathy effect -the idea that people are less likely to help others if other people are present (Crisp & Turner, 2009)- showing that the mere fact of imagining oneself inside a big group entails a reduction in help behaviours; a responsibility dispersion.

Moreover, and continuing on the lines of thought by Crisp et al. (2008), we can observe how mental imagery has been used in different fields of Psychology: developmental psychology

has used it as a procedure to evaluate children's symbolic capacities (Singer, 1972); clinical psychology uses these imagination techniques in phobia reduction through emotional control (Wolpe, 1958); cognitive psychology links mental imagery to its influence on memory and education processes (Paivio, 1968) and, last, personality psychology shows through these techniques how the imagination of the future acts as a guide for individual's actions (Markus & Nurius, 1986).

To summarise, mental imagery is a well-known technique inside various branches of Psychology and applied on different fields, including Social Psychology. If imagining a situation increases the accessibility of abstract concepts and concepts associated to social context (Garcia et al., 2002) and, as we have already seen, it activates the same areas (Kosslyn et al., 2001) and has similar effects as a real situation (Dadds et al., 1997), imagining an intergroup contact is supposed to have the same effects as participating de facto in this contact. In the words of Crisp et al. (2008): imagining intergroup contact should activate concepts that we normally associate with successful interactions with members of unknown groups, such as feeling more comfortable and less apprehensive about the prospect of future contact with that group". Once these foundations have been laid, we are ready to start with the main topic: imagined intergroup contact.

Imagined contact

As detailed in the previous section, mental imagery techniques increase the accessibility and expression of behavioural and emotional responses that are typical from real situations (Stathi & Crisp, 2008). Moving on from this, it is expected that imagining an intergroup contact situation elicits a similar response to the one that would occur in a real environment. According to Crisp & Turner (2009), when people imagine an intergroup contact they should activate the same conscious processes as if this was real, that is, they could think about the situation itself, about what do they learn about the Outgroup member, how the situation influenced them and how they felt about it, leading this to the same effects as in real contact. Thus, concepts that are usually associated with successful interactions with members of other groups would be triggered, reducing anxiety and allowing a greater predisposition to future contacts (Crisp et al., 2008). In fact, and related to the previous section (mental imagery), it would be easy to establish a comparison with the systematic desensitization technique in behavioural clinic therapies: this technique is used to treat phobias

and to reduce anxiety. Its functioning is based on the patient being gradually exposed to the object of the phobia until it becomes tolerable; phobic reaction is progressively reduced due to a decreasing of the anxiety (Yates, 1975). In other words, it is a simulation of the emotions involved in the action in a way that the patient can learn to anticipate their emotional conditions and increase the cognitive control over them (Marks, 1975).

On the other hand, various studies have demonstrated the impact imagined contact has over individuals:

First, it can be observed in the results of Turner, Crisp & Lambert (2007) after three studies, how participants who were instructed in imagining a positive interaction with a member from the other group showed more positive attitudes, including a reduction of stereotyping, than those who were in neutral condition. Likewise, other studies focused on attitudes from heterosexual men to homosexual men showed similar results (Vonofakou, Hewston & Voci, 2007). Thus, it is possible to conclude that imagined contact improves attitudes towards other social groups.

Second, other investigations state how positive imagined contact increases the projection of positive traits towards the outgroup (Stathi & Crisp, 2008). As formerly seen, projection can be defined as 'process or processes by means of which people expect others to be similar to them' (Robbins & Krueger, 2005), being this one of the main cognitive principles for ingroup favouritism. Stathi & Crisp (2008) point out that social projection should be stronger among members of the ingroup and weaker towards the outgroup; thus, individuals would be acting this way due to the perception of a big social distance with the outgroup (Stathi & Crisp, 2008). Therefore, a mediator factor in this social distance would be the perception of similarity (Ames, 2004), according to which when individuals perceive a big initial similarity with their counterpart the projection would increase and stereotype would decrease (Stathi & Crisp, 2008). To sum up, if positive contact makes the members of the outgroup to be perceived as closer, they will be more respected by the ingroup, benefiting themselves from positive social projection (Robbins and Krueger, 2005).

Third, imagined contact would lead to a reduction of intergroup anxiety. As seen in previous sections, intergroup anxiety is a delimiting factor in the success or failure of intergroup contact (Islam & Hewstone, 1993). Hence, it is important to assume this concept as a mediator of contact or contact hypothesis. As previously explained, high levels of intergroup anxiety can elicit negative effects and conflict on intergroup contact. If intergroup anxiety is reduced, individuals

would have nothing to fear from the encounter and it would allow the appearance of positive outcomes (Stephan & Stephan, 1985). Imagined contact, as an indirect technique -direct intergroup contact does not exist -, can allow individuals to face this situation with less rejection or fear, as the risks derivative from real contact are absent.

Fourth, imagined contact reduces stereotype threat (Steele, 1997), that is, the concern of confirming or being reduced to a negative stereotype about one's group, and, besides, it avoids the negative effect of self-stereotypes. In this case, imagined contact could act as a protection against stereotype threat, by eliminating the physical keys of the situation and thus allowing the individual to anticipate to the real situation (Crisp & Turner, 2009).

In summary, imagined contact contains the benefits affiliated to the Intergroup Contact Theory (Brown & Hewstone, 2005; Pettigrew, 1998), allowing its use in contexts where real or extended contact are not possible and, at the same time, serving as an element to protect and reduce the anxiety that is prior to real contacts. However, it is necessary to delimitate which are the ideal conditions in this kind of contact, as well as its administration way.

Optimal conditions for imagined contact

Turner, Crisp, and Lambert (2007) demonstrate with their investigation that imagined contact can, same as real or extended contact, improve intergroup attitude by means of anxiety reduction. Yet, they require a bigger study about ideal conditions to establish this method under the same conditions as the other ones, that is, they require a study on the mediator factors in imagined contact. The answer to these demands came through the investigation run by Stathi and Crisp (2008) in which, by means of three experiments, the optimal conditions for this technique are conceptualised.

From there on, Stathi and Crisp (2008) conceptualise several values that should be taken into consideration when preparing these imagined encounters:

Firstly, they show that prior investigations demonstrated that minority groups express bias and favouritism towards the ingroup in a more intense way than majority groups (Bettencourt, Miller, & Hume, 1999). As it can be seen in the meta-analysis by Tropp and Pettigrew (2005), relation between contact and prejudice reduction is smaller in minority groups as they are more

suspicious towards majorities and enjoy less the contact experience (Pinel, 2002). In this context, by their study with Indigenous and Mestizo Mexicans, they show that imagined contact leads to the projection of positive traits from the majority group but not from the minority one.

Second, on the basis of the SIT (Tajfel & Turner, 1986), where it is suggested that membership inside of a group provides a meaning for the individual, in order to maintain a positive self-image through the differentiation ingroup-outgroup leading to a bigger favouritism towards the belonging group (Brown & Abrams, 1986). The authors propose that those individuals with a high group identification (high identifiers) will tend to defend harder their group than those with a low identification (low identifiers) when the group identity is threatened, increasing the differentiation against the outgroup (Branscombe, Wann, Noel, & Coleman, 1993; Jetten, Spears, & Manstead, 2001). In other words, the recategorization in a common group as consequence of contact might amplify the intergroup bias among high identifiers (Crisp, 2006). Once again, in his research about British students imagining contact with international students, Stathi and Crisp (2008) show how the effects of imagined contact will have less impact on high identifiers compared with low identifiers.

Third, Stathi and Crisp (2008) wonder about which kind of identity (social vs personal) causes better outcomes when using imagined contact. In this sense, as we can infer from SIT (Tajfel & Turner, 1979), different aspects of self are related to different identities (Brewer, 1991); the derived identities from the membership groups respond to the social-self; instead, individual traits are related to the personal-self (Turner, Hogg, Oakes, Reicher, & Wetherell, 1987). Given this, social projection is facilitated when personal self is salient (Cadino & Rothbart, 1996; Clement & Krieger, 2002). In Stathi and Crisp's (2008) words: "One is more likely to use one's own traits as a judgmental anchor when one has recently been thinking of one's own traits". In this case, by means of their research with British students thinking about French people, they showed that the effects of imagined contact are bigger and better when personal-self is salient, as an activation of social self would threat the group identity, causing a negative outcome. The authors indicate that a good way to make personal-self salient is to use a Priming. For this, they propose to modify the evaluation order between the self and the outgroup (Cadinu & Rothbart, 1996): describing oneself firstly activates thoughts about the individual's idiosyncratic features (personal self). A positive image of the self that is thought a priori will be more easily generalised to the outgroup (Sears,

1983). Summarising, positive imagined contact in which personal-self is salient leads to a better projection to the outgroup (Stathi & Crisp, 2008).

Finally, in former researches (see Pettigrew, 1998; Pettigrew & Tropp, 2006), Stathi & Crisp (2008) the importance of a positive tone in the instruction is emphasised, as well as the absence of identity threats to create optimal conditions for imagined contact.

In conclusion, the interventions where imagined contact would have better outcomes will be those that are focused on majority group members, with low identification level, activating by priming the personal-self and using a positive tone in the instruction.

Limitations and advantages of imagined contact

Once demonstrated the validity of imagined contact as a useful tool to reduce negative implicit attitudes among groups, it is time to talk about limitations. The most important one, as happens in extended contact, is that the power and length of this technique is less strong that in real contact (Paolini et al., 2004; Turner et al., 2007); the real experiences produce stronger attitudes that indirect ones (Fazio, Powell ,& Herr, 1983; Stangor, Sullivan, & Ford, 1991). In return, imagined contact has the advantage of not needing a real contact opportunity or previous knowledge about the outgroup to be useful. Imagined contact must be understood not as a substitute of real or extended contact, but as a chance to act in the cases where the other kinds of contact do not apply (Crisp & Turner, 2009). On the other hand, imagined contact can be used as previous experience and training for real or extended contact to reduce intergroup anxiety (Stephan & Stephan, 1985) and as a way for educators and police-makers to educate on diversity. By this technique, and it being used under the proper conditions, the advantages of imagined contact overpass its limitations. To sum up, imagined contact is an economic and practical tool to reduce negative implicit attitudes and intergroup anxiety, as well as an ideal complement for those interventions that include real or extended contact (Crisp & Turner, 2009).

Chapter VI: Positive physical imagined contact

Once settled the basis for Intergroup Contact Theory (Brown & Hewstone, 2005; Pettigrew, 1998) and the several kinds of contact, our experimental paradigm is set to be expounded: positive physical imagined contact. In order to attain this, we will try to link the features and principles of imagined contact, as was previously defined, along with the results achieved by Seger et al. (2014) about the brief interpersonal touch. In other words, the work hypothesis is that beginning on the base that a brief interpersonal touch is enough to reduce negative implicit attitudes between different social groups, once demonstrated the validity of positive imagined contact as a tool with similar outcomes than Intergroup Contact (Brown & Hewstone, 2005; Pettigrew, 1998). Concluding, the simple imagination of a brief interpersonal contact with an outgroup member - with a positive instruction- will be enough to cause a prejudice reduction effect on participants towards the outgroup. In a more specific way, the results by Seger et al. (2014) suggest that interpersonal touch influences low level evaluations about the touched person's group rather than operating through conscious processes. This reduction, as formerly stipulated, occurs in an implicit level but not in an explicit one (Fazio & Olson, 2003) and fits with the ideal features and factors for imagined contact that were proposed by Stathi & Crisp (2009) -and previously summarised in this work. In other words, with this paradigm lies the will to demonstrate that the reduction of prejudice by the imagination of a brief positive physical contact with an outgroup member will lead to a similar reduction in the implicit attitudes that what is shown on Seger et al. (2014).

Therefore, and starting in this conceptualisation, the main goals of this research aim to: first, demonstrate the experimental validity of positive physical imagined contact as a useful tool to reduce prejudice. Specifically, there is an intention to verify if there is a reduction of intergroup prejudice following the theories explained before and, also, to show how intergroup contact can lead to the creation of common intergroup identities among the different groups, as well as the increasing of the perception of similarity (Eller & Abrams, 2004; Pettigrew, 1998). Second, to add information to this field in order to understand in a better way the theoretical and practical implications that the development of imagined contact shows in the research published so far. Also, we want to add data to improve our paradigm due to the lack of literature on physical imagined

contact. Finally, it is expected that this experiment can serve as an element to be compared with similar researches focused in this kind of contact (i.e., intergroup vicarious physical contact) that are being developed by other researchers; in particular, Andrea Carnaghi and Soraya Shamloo's, (from the University of Trieste) and Mauro Bianchi's (supervisor of this dissertation) works.

Concluding, once finished this literature review, the methodology used for the achievement of this objectives will be explained in the next chapters.

Methodology

Chapter VII: Method

Participants

Participants were 144 individuals with different nationalities. As the experiment was aimed to evaluate the consequences of inter-group imagined contact in a sample of Spanish participants, 6 participants were excluded from the analysis because they were not Spanish citizens, their mother tongue was not Spanish, or they did not indicate their nationality, leaving a total sample of 138 (71 female) participants with age varying between 18 and 59 ($M = 31,64$; $SD = 11,974$). Recruitment was done by publishing the link of the experiment in different university networks, as well as e-mail services and social networks. This decision granted a more representative sample than the usual undergraduate students commonly used in studies in social psychology, leading to a more diverse population which acts as a benefit for the generalisation of the results.

Procedure

An online questionnaire was used in order to collect data for the experiment. The questionnaire is an adapted -and translated into Spanish- version of the one used in former studies by the supervisor of this dissertation, Mauro Bianchi. Recruited participants were invited to open the access link to the questionnaire. Firstly, a screen was shown with general info about the research and a consent page where they were informed about their rights, the voluntary nature of the experiment, its anonymity, and possibility to quit at any time. By accepting these terms, the experiment started. Next, participants were asked to report their nationality and mother tongue. Once these data were introduced, participants were randomly distributed into one of the four possible conditions of physical imagined contact. Participants were exposed during one minute to a picture of two hands touching, with one hand above and one hand below. (White hand touching White hand or White hand touching Black hand) with the instructions to identify with the above hand and (positive or control) while exposed to the picture. Once this task was finished, the system granted a random ID number to the participants that served as identification number for the IAT - this number allowed us to identify the respondents' results and related them with his questionnaire due to our IAT was hosted in an external server. Next, participants started the IAT, which showed

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the instructions for the task and, once finished, an informative page showed their association strength results (feedback) in three possible ways: national priority, immigrant priority or not priority at all. When participants finished the IAT, the last part of the questionnaire started. This stage asked the participants to fill some demographic (age, gender) and explicit (number of immigrants known by the respondent, their nationalities and participant's skin colour) questions. After, using a manipulation check, individuals were asked to mark which condition they were exposed to - an immigrant's hand/ other person hand; imagining contact / imagining contact and this being positive. Finally, subjects had the chance to write down any comment about the experiment and, after an appreciation message, they were informed more specifically about the objectives of the research.

Materials

An online questionnaire was created in order to grant a better accessibility to the experiment and due to the resource limitations, that could make participants' control and mobilisation hard to develop in situ. This option allowed to reach the target population -Spanish people- in an easy and simple way. The questionnaire was developed using the online platform Qualtrics, a recognised website known by its important role in Social Science research and, in addition, due to its reliability and comfort in the treatment of data – having multiple options and compatibility with the most common standards in Social Science research as SPSS synthesis and Javascript features.

The questionnaire started by accepting an informed consent page that was shown before five different stages: first, two questions about the subjects' nationality and mother tongue. Second, one of four possible conditions (2 pictures x 2 instructions) was shown using a randomiser and participants were asked to write down their feelings about it. These pictures, and the consequent answer, served to the Priming purpose activating the individual-self (Stathi & Crisp, 2008) as referred in our previous chapters. Third, a random ID number -used to identify the user on the IAT- was given to the participant in order to do the task and link their explicit results with his personal IAT data. Fourth, the respondents had to answer a set of questions about themselves (Age, gender, racial consideration, number of known immigrants and their nationalities). Finally, using a manipulation check, subjects had to mark which experiment condition were exposed to.

Conditions:

To test our hypotheses, four possible conditions were developed (See Appendix 1) Our experiment was built using a 2x2 design with the following between-subjects factors: Physical contact picture (White hand touching Black hand vs. White hand touching White hand) and Type of Contact (Positive vs. Neutral –Control- instruction). That is, participants were exposed to one of the two possible pictures (White hand/Black hand vs. White/White hand) presented next to one of the two possible instructions (Positive vs. Neutral). The decision of putting this manipulation at the very beginning of the experiment relays on the inclusion of the Priming Criterion for the optimal result of imagined contact, as referred in Stathi & Crisp (2008) and summarised in our State of Art. As explained before, our paradigm rests on the idea of positive physical imagined contact. By this means, the pictures represented a physical contact situation between the hands of the two people participating in the action (White-Black/White-White). This choice is mediated by the first condition of Stathi & Crisp (2008), which specifies that the optimal function appears when majority group members (in our case, White) are the participants in the imagined contact experience. In the same way, these conditions rely on Seger et al. (2014) study, in which a brief interpersonal touch between members of different groups is enough to reduce the intergroup prejudice. Moreover, the choice of these pictures (where only two hands are presented without showing any other body parts) is due to facilitate for the participants to identify themselves in an easy way with the hand in the picture. This manipulation follows other similar psychological experiences on the Body Transfer Illusion (Petkova & Ehrsson, 2008) -the illusion that another person's limb becomes ours through the visual perspective manipulation. As an imitation of the Rubber-hand illusion (Ehrsson, Spence, & Passingham, 2004) - where participants were deprived of the vision of one of their hands, substituting it in their visual field by one made in plastic. This fake hand was rubbed and then threatened by a nail. Individuals felt the risk of pain in his fake hand and put away his actual hand; showing that his mind "owned" the fake plastic hand-, it was found that the position in which people look at the screen (reducing the vision of their hands) would allow to work with this kind of ownership illusion. This is, facilitating and improving the imagery task.

The pictures were preceded by specific instructions, developed following a similar procedure as the one used in Crisp et al. (2008). In their paper, these authors propose a very simple construction for the simulation task (imagined contact):

We would like you to take a minute to imagine yourself meeting [an outgroup] stranger for the first time. Imagine that the interaction is positive, relaxed and comfortable.

To achieve a good outcome on this kind of practices, it is mandatory to pay attention to two key elements (Crisp et al., 2008). First, it is critical to create a mental situation of interaction with an Outgroup member, given that the opposite case -the imagination of an outgroup member without interaction- does not have positive effects in the attitudes (Turner, Crisp, & Lambert, 2007). Second, it is important to use a positive tone for the instruction either in actual contact or in imagined contact. In fact, imagined contact works better when is described as positive versus neutral (Stathi & Crisp, 2008). As explained above, in the current experiment both group membership of the touched hand (ingroup versus outgroup) and type of physical contact (positive versus neutral) were manipulated, so that participants were randomly distributed into four different conditions.

In all the conditions, participants had to pay attention to the picture for a minute, following the given instructions. After, and in order to reinforce the instructions, individuals were asked to write down the feelings and sensations they had during the exposure to the picture (Stathi & Crisp; 2008).

In a more specific way, the instructions where the following:

- Positive: [Original in Spanish] "Now, we ask you to watch the next picture for a minute. You must identify with one of the characters. Specifically, we ask you to imagine that the right hand in the picture is touching other person's/ an immigrant's hand. Imagine also that in this contact you feel relaxed, being a positive experience where you found unexpected things."

- Control/Neutral: [Original in Spanish] "Now, we ask you to watch the next picture for a minute. You must identify with one of the characters. Specifically, we ask you to imagine that the right hand in the picture is touching another person's/ an immigrant's hand."

Implicit Association Test (IAT)

The Implicit Association Test (IAT; Greenwald, McGhee & Schwartz, 1998) served us to explore the relation between the explicit and implicit respondents' information. The IAT is a computer programme that measures the individual differences in mental associations between pairs of concepts. This tool allows the participants to respond to a series of "items", in our case, words -although it can be adapted to pictures or symbols- that need to be classified in four different categories: two of them are referred to concepts to discriminate (e.g. Flowers or Insects) and another two referred to attributions (e.g., good or bad) that change in position during the task. Participants have to answer as fast as they can, striking one of the two keys that are instructed for the classification of the items (e.g. "E", "I"). For instance, and taking as an example the default template given by Project Implicit (Harvard, 2004), and as it is summarised in Sheets, Domke & Greenwald (In press): "a participant is told to hit one key (typically the "I" key) if either "flower" or "good" comes up, and a different key (typically "E") if not. In a subsequent stage, the participant must hit the "I" key if either "insect" or "good" comes up, and "E" if not (see Greenwald, McGhee, & Schwartz, 1998; Lane, Banaji, Nose, & Greenwald, 2007). Relative association strengths are measured by examining the speed with which participants respond in the various conditions (flower and good with the same key versus insect and good with the same key)".

The IAT creates measures that are derived from the response latency among the different tasks. These measures have to be interpreted as "association strength between concepts" (Greenwald, 1998), under the assumption that the participants will answer faster when the concept and the attribute are strongly associated in his mind and, thus, they will have a slower latency and a bigger number of mistakes when the mental association were weaker (Lane et al., 2007). In other words, fast responses and without mistakes show strong relations between concepts; slow responses with many mistakes indicate weak relations between concepts and attributions. The validity and consistence of this tool has been tested and proved in several times (Banse, Seise & Zerbes, 2001), being considered a strong instrument for the research in this field.

Our IAT: Spanish Implicit Attitudes

For this experiment a version of the IAT based on a modified template from the Thomas Schubert's Javascript IAT version (https://github.com/thomasschubert/IAT) was developed. The IAT was host in an external server. The link between the questionnaire (conditions) and the IAT

was ensured using a ID number and a link that directed participants from Qualtrics to the external host (https://realidadevirtual.ulusofona.pt/IAT/index.php). Using the author's words, this IAT version is explained as follows:

"This is meant to be an easy-to-use implicit association test (see Greenwald, McGhee, & Schwartz, 1998) for use by interested psychologist. The flow of the test is driven by Javascript and participant responses are stored in a comma-delimited text file. At the end of the test, a simple effect size is calculated to show the participant's tendency to find two categories more congruent than the other two categories."

Given that, and following our interest in having the most unbiased data for our experiment, attention to the anonymity that is awarded by the online versions of IAT was paid, due to its importance at carrying out studies based on sensitive attitudes (Friese, Bluemke, & Wanke, 2007).

As far as the content of the IAT was concerned, the categories National vs Immigrant and Positive vs Negative attributes were used to assess participants' implicit association toward immigrants. The items of such categories were chosen in accordance with Spanish National Statistics Institute (INE), which, in its web version, allows research on the database containing the national and immigrant's names that are more common in Spain (INE, 2011). About immigrant ones, names from the main foreign nationalities represented in Spanish population were included. For the current research the following names were chosen:

- National: JOSÉ, ANTONIO, JUAN, MANUEL, FRANCISCO, LUÍS
- Immigrant: MOHAMMED, AHMED, SAID, GHEORGHE, VASILE, IOAN

By its side, attributions were a translation and adaptation from the Greenwald's (1998) templates in his basic IAT pack:

- Positive: AMOR [LOVE]; FELIZ [HAPPY]; PAZ [PEACE]; PLACER [JOY]; REGALO [GIFT]; PARAÍSO [PARADISE]
- Negative: ODIO [HATE]; MALDAD [EVILNESS]; TRAGEDIA [TRAGEDY]; DESASTRE [DISASTER]; ACCIDENTE [ACCIDENT]; DOLOR [PAIN]

Finally, participants' IAT scores (d-scores) served as our main dependent variable.

Chapter VIII: Results and discussion:

Data were analysed using SPSS Statistics software version 22.0.

The participants' response latency data (N=138) were obtained through an IAT. As explained before, the participants' IAT scores (*d*-scores) served as our main dependant variable (DV). The *d*-scores were attained by using the last algorithm developed by Nosek, Bar-Anan, Sriram, Axt and Greenwald (2014), which improves the potency of the test and increases its sensitivity. Nosek et al. (2014) define *D* as the difference between the average response latencies between contrasted conditions divided by the standard deviation of response latencies across the conditions. Likewise, *D* reduces the impact of external influences by increasing sensitivity to detect relationships between known covariables.

To test our hypothesis, a 2x2 analysis of variance (ANOVA) was calculated using the pictures (ingroup-outgroup [ig-og] vs ingroup-ingroup [ig-ig] and the instructions (positive vs neutral) as between-subjects factors and having the participant's IAT *d*-score as dependant variable (DV). The results did not yield any significant result ($F < .67, p > .41$), not confirming our hypothesis. As can be seen in Table 1 (see below) no differences in the *d*-scores were found between conditions ($F < 1.05, p < .31$).

Table 1

Tests of Between-Subjects Effects

Dependent Variable: D-iat

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	,209[a]	3	,070	,467	,706	,010
Intercept	34,595	1	34,595	231,851	,000	,634
picture	,129	1	,129	,867	,353	,006
instruction	,006	1	,006	,041	,840	,000
picture * instruction	,060	1	,060	,399	,529	,003
Error	19,994	134	,149			
Total	55,123	138				
Corrected Total	20,203	137				

a. R Squared = ,010 (Adjusted R Squared = -,012)

Unlike it was expected, the results obtained after the analysis do not allow to corroborate the starting hypothesis: the improvement of implicit attitudes when there is an imagined positive contact. It is possible that the absence of statistical significance is due to the size of the sample (N=138). Limited samples might make it difficult to detect underlying effects that could be recognised in studies with a greater number of participants. In the same way, the big intercultural contact among respondents to the experiment would be a factor to take into consideration. As it can be seen in Table 2 (see below): given the total of participants (N=138), 57.2% of the sample stated that they knew five or more immigrants personally; 18.8%, from two to five; 15.9%, at least one, and only 3.6% declared not having any relationship with immigrants. In a simpler way, more than 90% of the sample expressed the existence of knowledge and contact with members from other groups. This wide knowledge and intergroup contact could explain the absence of effect on this experiment, for this prejudice reduction may have existed before the manipulation.

Table 2

Number of known immigrants

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0	5	3,6	3,8	3,8
	1 to 2	22	15,9	16,7	20,5
	2 to 5	26	18,8	19,7	40,2
	5 or more	79	57,2	59,8	100,0
	Total	132	95,7	100,0	
Missing	System	6	4,3		
Total		138	100,0		

This hypothesis could be demonstrated through the development of future investigations with a greater number of participants or with more diverse samples. Nonetheless, and despite the absence of results in this investigation, several studies have shown the empirical and practical validity of the use of imagined contact, as well as its modalities (e.g., Cameron et al., 2011; Crisp & Turner, 2009; Seger et al. 2014; Stathi & Crisp, 2008); due to this, it is vital to stress the importance and usefulness of this tool for prejudice reduction and preparation for intergroup contact.

Future Research:

Once imagined contact has shown positive results on prejudice reduction in a wide range of settings -as detailed in the State of Art-, new researches are necessary to reinforce the already existing techniques and to delimit the optimal factors in a better way. In the case of this study, an experiment with a greater number of participants and the inclusion of new contact conditions (e.g. by modifying the position and order of appearance of the hands in the pictures) could allow the emergence of significant results.

Chapter IX: Conclusion:

The intention of this paper was to demonstrate the existence of an improvement in prejudice reduction, at levels of implicit attitudes, when an imagined positive physical contact is given. Unfortunately, the results could not show statistical significance in order to prove this hypothesis. In any case, it is critical to stress, once more, the importance of the Intergroup Contact Theory (Brown & Hewstone, 2005; Pettigrew, 1998) as well as its practical development in the various contact modalities (real, extended or imagined).

Further research will need to continue the established path of demonstration of its utility, the aim of this being to find the best tools for researchers, educators and policy-makers to apply these techniques, so that the existent relationships among groups can be improved and, consequently, the conflicts bound to these relationships can be reduced.

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Tables

Table 1

Tests of Between-Subjects Effects
Dependent Variable: D-iat

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	,209[a]	3	,070	,467	,706	,010
Intercept	34,595	1	34,595	231,851	,000	,634
picture	,129	1	,129	,867	,353	,006
instruction	,006	1	,006	,041	,840	,000
picture * instruction	,060	1	,060	,399	,529	,003
Error	19,994	134	,149			
Total	55,123	138				
Corrected Total	20,203	137				

a. R Squared = ,010 (Adjusted R Squared = -,012)

Table 2

Number of known immigrants

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0	5	3,6	3,8	3,8
	1 to 2	22	15,9	16,7	20,5
	2 to 5	26	18,8	19,7	40,2
	5 or more	79	57,2	59,8	100,0
	Total	132	95,7	100,0	
Missing	System	6	4,3		
Total		138	100,0		

Appendix 1

Picture 1

White & White [Ingroup-Ingroup] Condition

Picture 2

White and Black [Ingroup-Outgroup] Condition