

*”Identity, Group membership, psychological consistency : the discriminated in the economics of discrimination”*

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23 juin 2014

# Remerciements

Je remercie Marie Claire Villeval d'avoir accepté d'encadrer ce travail de recherche, et pour ses commentaires qui ont fait avancer ma réflexion.

Je remercie également mes camarades du master, pour les discussions stimulantes, et les pauses café pendant ces mois de rédaction du mémoire.

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## **Abstract**

We start from the fact that the discriminated is almost absent from the theory of discrimination in economics. Indeed, while the reasons that make one discriminates another are well established, not much has been said about how the discriminated will react. Putting together concepts such as psychological consistency and group identity, we propose a frame that sums up some strategies that a discriminated can pursue. We end up analysing the conditions under which an individual would consider to get away from the groups he is assimilated with in order to avoid discrimination, at the expense of his psychological consistency and of his group related identity.

# Introduction

In some occasions, people are led to hide part of their identity in order to get better off in their life. In those cases, belonging to community seems to be at odds with some other dimensions of success in life. Young people from the suburbs can let their distinctive signs down, and adopt a way of speaking or clothes that would enable them to enjoy a more enviable economic situation. Similarly, a religious person could be tempted to hide her faith if she thinks it would help her integrate. So doing, they will try to lower the discrimination they face. Thus those strategies seem to be perfectly suitable in the first place, the individual would likely incur a cost in doing so. Otherwise, discrimination linked to some hidable dimensions wouldn't hold and stay in the long run. Thus it would be interesting to investigate what tailors the behavior of the victims of discrimination. Indeed, a lot has been said about what triggers discrimination. What motivates one to discriminate may be related to beliefs, tastes, or asymmetrical informations (Arrow, 1998; Becker, 1957, 2010; Phelps, 1972). But not a lot has been written on the effect of discrimination on the behavior of individuals who are victims of discrimination. How should they react? Will they do anything to avoid discrimination? Individuals may try to hide a part of their identity to avoid suffering a discrimination, or show that they do not deserve discrimination, by working harder, or other strategies. Our point is to bring together three concepts related to behavioral economics: Discrimination, group identity and self consistency. *Discrimination* denotes the differentiated treatment between people who belong to different groups. Those groups are tighten by a the sense of a common fate or the various benefits members can pool from others. This constitutes the second notions, *group identity*. This is straightforwardly linked to discriminations: the existence of groups relies on group identity, and discrimination relies on group membership. Group identity

is composed of a set of norms, beliefs and other shared by members. As regards to group, individuals may have multiple memberships, that are either chosen (self-categorisation) or undergone. This multiple membership implies that under different circumstances, individuals may reinforce his link to this or this group.

Moreover, we posit that individuals are not inert toward group identity. On the one hand, due to environmental stimulus, they can choose either to signal their attachment to the group, or try to pull back from the group. We consider discrimination as an environmental stimulus, that may impact on how people identify with groups. On the other hand, since individuals are endowed with personal identity, and set of norms, they can also try to influence their social identity to reduce their self-discrepancy. *Self-discrepancy* (or cognitive dissonance) springs from the fact that individuals are endowed with inner norms. They would want to match those norms as much as possible but circumstances can lead them to violate those norms. For example, one might accommodate with his inner norms to be accepted in a group, or to take distance with a prejudice against a group. This could be made at the expense of a sense of internal consistency. Put differently, we assume that a trade off can be at work between inner motivation, related with what one would do had no social strength influenced his decision, and external motivation, due to those social strengths.

What we want to do is to see how those concepts can articulate in an economic framework, and to which extent it would give an insight on the behavior one can oppose to discrimination. We will in what follows limit ourselves to identity management issues <sup>1</sup>.

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<sup>1</sup>Indeed, one can imagine that an individual faced with discrimination could want to prove his value by working harder

We adopt the point of view of an individual, who takes decisions that will affect those three dimensions. Basically, we will be in a utility maximisation situation, and the point will be to define the utility function of an individual. This utility will take into account the discrimination he'll face through monetary earnings <sup>2</sup>. It will also take into account the self-psychological comfort the decision leads to, accounting for the distance between actual choice and some kind of inner reference points. And it will ultimately take into account the social identity utility, which derives from the fact of being identified with an existing group <sup>3</sup>.

We aim at analysing the strategies an individual can develop when he's categorized with a group that is discriminated against. To illustrate this, we can think of the following situations<sup>4</sup> :

1. An individual is categorized as belonging to a group associated with bad stereotypes. He doesn't feel close to that group, and he will act in a way that makes him get away from the group. He'll lose the benefits of belonging to the group, but he'll lower the risks of discrimination, and be able to act the way he wants, outside of group-stated norms of actions. He trades off group membership for no discrimination.
2. An individual is categorized to belong to a group, and whatever is inner norms of actions, and due to the value he assigns to group membership, he'll behave as to be accepted in the group, even if he suffers from discrimination.
3. An individual is categorized to belong to a group. He feels strongly close to the group in terms of norms, but he'll be willing to act a different way to lift the

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<sup>2</sup>But we can imagine to further integrate the pure psychological cost of being discriminated

<sup>3</sup>Thus this group might be later made endogenous

<sup>4</sup>Those situations will be more accurately described in the models

stereotypes that weight on the group, changing the very identity of the group.

That is to say that we aim to identify the circumstances of the trade off between group membership, psychological consistency, and discrimination. Self-consistency can hurt individual's strategies to fight against discrimination, and discrimination can lead to greater self discrepancy. This will be linked with the strenght of discrimination, against value of the group, and with the media of self consistency.

The position an individual adopts relative to a social group has been studied in psychology, and notably the conditions under which an individual sticks to a group inspite of the harms it incurs ; or the conditions under which he'll fly away from the group. Our work is close from that, but fits in an individual choice model. Indeed, not much have been said on the discriminated in economics, and we bet that being discriminated would lead one to react. Here, the reaction will be in terms of position relative to the group. The model will account for a identity choice for the individual, which will determine wether he belongs to a group, and consequently discrimination, accounting for the need for self consistency. We find that people that are close from the group can adandon it, and that it is caused by strong discrimination, or relative low value of the group, or low need for self consistency. We see what follows as a first frame to develop for further theoretical and ultimatly empirical assessment of the behavior of a discriminated.

The remainder of the paper will be organized as follows : first, we will present the literature we integrate our work in, then we will set a theoretical frame, that we will eventually develop, and ultimatly, we'll conclude.

## Part I

# Literature review

As said before, our work will integrate three research streams, discrimination, group identity, and self-consistency. We believe that they can be brought together fruitfully and that's it would bring interesting insights on our question. We now review the literature related to those streams.

## 1 Discrimination

In our model, discrimination is a key variable, but our point is not to deeper our understanding of discrimination from the discriminator point of view. We consequently refer to very classical theoretical approaches to discrimination. Becker (1957, 2010) proposes the first economic analysis of discriminations. For him, individuals have pure preferences for discrimination against a given type of individuals. In the case of discriminating employers, they are willing to pay a lower wage to individuals that belong to some groups. From Becker's point of view, this need not be a problem : the competition between employers to hire workers is supposed to "compete away" discriminations. Firms that are discriminant won't be able to sustain a proper hiring policy. The "à la becker" discrimination can be refered to as a taste for discrimination. That's because the manager, or colleagues, dislikes a kind of person that those persons will be discriminated against. Phelps (1972) or Arrow (1971) propose a different approach to discrimination, which is supposed to be rational given available information and given beliefs. It's called "statistical discrimination". When a principal has to choose an agent among a pool of candidates,

he tries to assess candidates productivity. To do so, he can refer to group membership of the candidates, and use the available information about the group rather than about the individual. Put differently, the information about the group is less costly to gather and process, so the principal will use it rather than collecting the information about the individual. This setup doesn't exclude unfounded discrimination, since the information about group productivity can rely on subjective stereotypes (beliefs).<sup>5</sup> Arrow (1998) proposes a survey on the economic theory about discrimination. In addition to the points below, he states that discrimination in labour relation can stem from other employees taste for discrimination, as a particular case of network outcome : discriminating peers are less willing to work with a type of person that eventually will be either push out of the job or relatively poorly treated.

The theoretical framework has induced a number of empirical assessments. First, following Oaxaca (1973), econometric work have aimed at identifying and quantifying wage differences between members of different groups. The idea is to use a variety of control variables to assess the pure impact on wage of a given group membership, captured by the coefficient associated to a group membership dummy variable.

Experimental economics has investigated this topic as well. Among very classical lab experiments, Fershtman and Gneezy (2001) propose a test through different simple games to assess discriminations. They show a strong prevalence of discrimination, whatever the game played, that matches the stereotypes in the studied society. This contribution takes existing groups : the two main Jewish groups in Israeli society. Trust, reciprocity, and

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<sup>5</sup>To illustrate this, we can think of sexism : a sexist (man) principal can discriminate women because he globally assumes them to be less productive.

altruism are assessed, and shed light on discrimination between those two groups. Dickinson and Oaxaca (2009) also tests discrimination in the lab. This time, discrimination is related to a higher variance of talent distribution in the population. They show that since principals are risk averse, they discriminate agents from a population with the same average productivity, but higher variance. These contributions belong to a first stream of lab experiments on discriminations, which uses existing groups to assess discrimination. Other contributions, such as Chen and Li (2009) try to figure out the minimal condition for a group to induce discrimination. The idea is to assess if a group artificially generated in the lab is sufficient to bring discriminations. They find that, for social preferences, group membership matters even for induced groups, indicating that some discriminations are acting. Charness et al. (2007) find that, for strategic decisions<sup>6</sup>, the minimum group paradigm is not respected, but raising the saliency of the group, by letting other group members assist to decision, individuals become discriminating in decisions. Members of the same group are better treated than others<sup>7</sup>. In the same stream, Zizzo (2011) assesses whether discrimination is favoring ingroup mates, or penalising outgroup individuals. The idea is to assess how discrimination works, when there is no strategic consideration i.e. no objective benefit in favoring ingroup / disfavoring outgroups. To do so, different games are played, such as dictator game, bargaining game, coordination game, ultimatum game. The outcome is that more than the half of the members of groups discriminate outgroups in a negative way, which is then assumed to be a main feature of discrimination.

Parrallely to the lab experiments, some field experiments on discrimination have been led. For example, List (2004) assess discriminations in a real-life setting, by hiring people

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<sup>6</sup>i.e. monetary common interests

<sup>7</sup>For instance, in a coordination game, a individual who is supported by an audience of his group, playing against a member of the other group, will be more aggressive

to conduct bargaining in a real market for sportcards. Buyers and sellers are recruited. Sellers are endowed with a common sportcard, for the price to be well-established, and with a reservation value, to incite them to bargain. Buyers are endowed with some money, and have to buy the same card. At the end, authors are able to see that offers to minorities are univokly disanvantageous.

Behavioral reactions are not as common as the following contribution that explain why people discriminate. Sanfey et al. (2003) show the neural reaction to unkind treatment from other, which can be regarded as a reaction to discrimination. In a few word, the same part of the brain is activated when one have to respond to an unkind proposal in the dictator game than when experiencing physical disgust (the insula). This is informative about the emotional reaction of one to some discrimination, but doesn't say a lot about how one can actually react in terms of behavior.

Our contribution is to propose a new perspective on discrimination, and consider the discriminated point of view instead of the discriminator point of view. We believe that an individual who is subject to discrimination will be led to consider to leave his group, at the expense of the social identity part of his identity.

## **2 Identity, group identity and social identity**

In most of the literature on discrimination, discrimination arises when an individual is member of a group that is subject to stereotypes. In the statistical discrimination literature, one is discriminated because it's less costly to assess some measure of the productivity of the group (mean, variance...) than his own productivity. In experimental literature, even minimal groups (thus group induced in the lab) may be sufficient to

generate discrimination. That's why we think the two notions can fruitfully be brought together. We focus on the notion of social identity, that brings together an idea of group membership, and identity linked to those groups. Group identity is a component of an individual's identity. This identity linked to the group can be rooting stereotypes about members characteristics.

A frame-setting paper about social identity is Akerlof and Kranton (2000). The authors describe how individuals are assigned to social categories, and how those social categories shape individual's behavior through an enforcement of a set of norms. Indeed, groups are defined by norms of behavior, that can range from what to wear to how conciliatory to be with authority. Thus, individuals who value being integrated in social groups would act in such a way that they can be accepted in the group. We see the importance of norms in this literature. If we consider an inert group, norms are to be accepted and interiorized by individual in order to be accepted in a group. In a sense, the theory by Akerlof and Kranton (2000) is issued from Tajfel and Turner (1979) theory of self-categorization : people self-categorize themselves, and interiorize the norms of the category. They are also assigned to groups by peers, or outgroup individuals, and a part of their social identity is partly undergone <sup>8</sup>. Mainly, the theory of Akerlof and Kranton (2000) is a baseline intellectual model for most of the literature about social norms in economics.

A complementary stream of contributions is the literature on social ties. One can refer to Van Dijk and Van Winden (1997); Van Dijk et al. (2002); Sonnemans et al. (2006). Social ties refers to a set of links that do not transit essentially through market trades. Rather, social ties refer to emotional connections between individuals, as well as reciprocal services or mutual confidence. Social ties and social identity converge in the sharing of

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<sup>8</sup>One can think about gender or race, as a big undergone part of one's identity

common fate by individuals. Social ties arise from interactions between individuals whose utilities are interrelated, contributing to create a virtuous prosocial slope for behaviors or a hostile relation rather not likely to encourage collaboration. This depends on what affects individuals allocate to peers. In some sense, social ties is the chosen part of social identity, which is at the same time chosen and undergone.

Aside from economics, Ellemers (2012) propose a description of the nature of groups. Groups not only stem from the addition of human behaviors. They bear independent selves, the sum of individual behavior does not fully explain it. So groups influence individuals members, whose behaviors are partly tailored by what the group's self implies. Individuals are at each time members of different groups, to which they are categorized by other and by their own selves (self-categorization). So individuals, depending on both their emotional attachments, the strength with which they are categorized to group, psychological features, and other contextual contingencies, have their behaviors getting away from what they would do had they be lonely. This may lead one to think of it as an effect of the willingness to be member of groups and further, of resulting discriminations. This may mean that individuals value group membership. This has been shown as well in neuroscience, for which the loss of group membership or exclusion results in a pain that can be assimilated to physical pain (Panksepp, 2003; Eisenberger et al., 2003).

Economics then took interest in what motivates individual group membership. For instance, Heap and Zizzo (2009) show that individuals value groups, by organizing a market for group membership in the lab. In this market, the price at which group membership is traded overcomes the material benefits in terms of "ingroup better treatment". This indicates a psychological, non-monetary valuation. Benjamin and Choi (2010) show

how a social identity can be manipulated in the lab. To do so, they present a utility function integrating the group identity of an individual, and the strength with which is linked to this group. The stronger the link, the closer the behavior of group member is to the group ideal behavior (the norm). The strength is manipulated thanks to saliency of the group <sup>9</sup>. This supports the idea that states that environmental cues may trigger a switch in one's proximity to groups.

We also can refer to Horst et al. (2006) for their model of the link between group and identity, with endogenous group formation, and identity shifting. They propose a nice reflexion about the concept of identity. They emphasize the fact that, if determining for individuals, individuals can also try to tailor their own identity. For instance, given their tastes, they'll choose to match with a social group, but not only the motivation is to reduce self-discrepancy, but also to depict themselves in socially glowing colors. The idea of a both chosen and undergone identity is present. In this setup, groups are endogenous : people choose to join a group for self and social motives, and those groups are modified by the characteristics of the new members. They also notice that the self identity may shift, to account for the change in one's inner norms or social acquaintances, which could lead to a shift in the social structure of the society : groups evolve as a consequence of the evolution of self identities. The model put the light on the intrinsically versatile nature of identity, accounting for the multiple nature of identity.

So group identity is a recent topic, and is linked with discrimination in the first place,

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<sup>9</sup>experimentally, this means that the group ideal is emphasized in the instructions. For instance : in the treatment, questions were asked to subjects about their ethnic background such as the language spoken at home, and this was sufficient to trigger more savings by subjects of asian descents, consistently with the assumed norm of behavior of asian american people.

since group membership and discriminations are the two sides of a same coin. This seems to feed our intuition that, if possible, one would tinker the strength with which he is related to a group to moderate the discrimination he faces. But group identity doesn't exhaust the identity concerns of individuals. Some other dimensions may explain that one is not always up to accept to betray one's peers. We can introduce a more psychological part of identity, that is linked to psychological consistency and discrepancy.

### **3 Psychological consistency and discrepancy**

The idea of multiple selves, here the social and the inner self, sheltered in one self has been developed for a long time in psychology. Festinger (1962) or Higgins (1987) have contributed significantly to the so-called cognitive dissonance theory. If an individual shelters multiple selves, those are not necessarily totally consistent. Situations sometimes favor one self from another, which is likely to imply psychological discomfort. Like other psychological features of human behaviors, economics has taken interest into that.

Generally, an overview of the investigation of economics into psychology is provided by Rabin (1998). He emphasizes the fact that economics should integrate psychological dimensions of human behavior, such as multiplicity of selves. This has been done so far in a variety of works, and notably in time-preference related issues. In this context, an individual's behavior faced with an intertemporal choice could be considered as a problem of allocation of a (scarce) resource across the successive selves of the same person. Introducing this subtlety potentially allows to unbury tensions within a person whose successive selves do not necessarily share the same preferences over the outcomes of a given choice. Bénabou and Tirole (2004) provide an example of those works. For instance, the decision of smoking is beneficial for the present self of a given person, as far as he likes

it, but almost surely detrimental to future self of the same person since it brings health and addiction issues.

This could extend to social related plurality of selves : If groups impose norms to their wanna-be members<sup>10</sup>, individuals have ideals for themselves that need not match those norms. This could induce a bargaining between the individual self and his social counterpart. For instance, Akerlof and Dickens (1982) put that individual are not necessarily acting in the narrow sense of their individual self interest. We can interpret that as the fact that each individual has, just like the group, an ideal norm of behavior, that he would follow had no social group existed. This refers to some individual self-image, and sense of duties. Getting away from this norm might introduce psychological harms, at the same time that the social self can enjoy some social benefits. Hence people might be divided between this social and individual norms, that need not be totally consistent. The implicit idea here is that those strenght would taylor one's behavior, for instance social consideration would push one into budging with his own aspirations.

For instance, Aguiar et al. (2010) propose a critical review of identity in economics that can help stretching a bridge between the social and psychological facet of our topic. The first critics is that identity, as defined by Akerlof and Kranton (2010, 2000) seems to pool together a large set of different "non typical" motivations. At the same time, it refers to social categories one feel associated to, norms of those categories, norms that one assigns to his own behavior. In this point of view, social identities refers to various motivations of individual behaviors, that can be contradictory. So doing, this contribution underlies the ideas that social identity is only a portion of one's identity that has to

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<sup>10</sup>It may be more correct to talk about assigned members, since there is this issue with categorization

be complemented by a more psychological, self-centred idea of identity. This is a point we aim at adding in further developments, the psychological part of motivation will be thought of as norms that an individual impose to himself, and that have a similar impact as norm his social categorization yields him. Ellemers et al. (2002) propose a taxonomy of the situation under which the social component of the identity will dominate, and the situation under which the self-component of identity will dominate. The idea is that, depending on circumstances, norms that shape the behavior of an individual will stem either from the social identity norm, or from the self identity norm.

Our model will also account for those two components of identity, but rather assumes interplay of those two components rather than alternates resort to either component. Indeed, if an individual chooses to avoid discrimination by taking some distance to a given group, he may suffer some discomfort related to the fact that additional to a loss of social status, he'll incur a psychological cost because of his inner closeness to the group.

To sum up, we have three dimensions in our problem, that we aim at bringing together. To some extent, Van Vugt and Hart (2004) in psychology have a similar approach, by showing how an individual categorized with a group can turn of an external beneficial offer since he feels committed to the group.

The previous development aimed at showing that part of the behaviors against discrimination can be thought of in terms of group and psychological dimensions, when faced to monetary downsides of stereotypes. Putting everything together can help us shade lights on the question of the discriminated in the economics of discrimination.

## Part II

# The model

We now develop a simple model that will bring together previous concepts. The general idea of the model is as follows : we focus on the decision by an individual. This decision is identity related, thus can be about the way the individual will dress, his reluctance or taste for authority, and so on. The decision impacts three dimensions of the individual's satisfaction : self identity, group membership and identity, and discrimination. Given this decision, the group will decide wether to accept or reject the individual, based on a anthropomorphic rule. The rule is known by the individual who will take into account the reaction of the group to his decision. In last instance, a discriminant principal will decide of the wage he'll offer to the individual, depending on his group membership.

## 1 Behavioral hypotheses

### 1.1 The individual

The individual has a utility function that depends on his raw consumption, his social utility which is equivalent with being accepted in a group, his self-consistency utility :

$$V = \underbrace{W(G(X))}_{\text{monetary utility}} + \underbrace{\alpha G(X)}_{\text{group membership utility}} - \underbrace{\beta |X - X_0|}_{\text{psychological consistency utility}} \quad (1)$$

The individual chooses a action  $X$  that we call an "*identity action*". This is reported in figure 1. It refers to a symbolic action, such as : what to wear, which music to listen to, what behavior to exhibit toward authority and so on. This action is subject to inner

norms for the individual, denoted by  $X_0$ . This is supposed to capture his inner taste, the one that would arise with no external pressures. Moreover, it would indicate a natural proximity with the group, who also have norms of behavior that tailor its members behaviors. Moreover, the  $|X - X_0|$  term is supposed to capture the distance between inner taste and the choice that take into account the consequences of his choice on his social identity and wage. Choosing a  $X$  far from  $X_0$  is costly, and the higher the  $\beta$ , the more costly it is.  $\beta$  represents the need for self consistency. We refer to it as the self consistency parameter. This is supposed to capture some psychological dimensions related to the desire to be "consistent" with own norms. This could be further interpreted in terms of self-confidence, low willingness to be assimilated to a group and so on.  $\alpha$  is the value put on group membership. Like stated in social ties literature, the value of group membership is determined by several dimensions. In what follows, we'll focus on economic upsides of being member of group. This can be related to services exchanges, help, monetary support and so on.<sup>11</sup>  $W$  is the wage earned, that depends on  $G(X)$  since, as we will see, group membership implies discrimination.

Fundamentally, this functional form for utility stem from works cited in formerly, such as Akerlof and Kranton (2000, 2010), or Ellemers (2012). It means that the individual is embedded in a social context. This social context is here materized by the rattachement to a group, and the norm of the group. It further means that the presence of the group with it own norms will inflect individual's choice as regard to the choice he would have done had the group not existed. This is related with the point that the group is at the same time choosen and undergone. Indeed, if discrimination are high as regard as what

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<sup>11</sup>However, one could argue that the other benefits of being part of a group would push the group membership value in the same direction. That is to say that emotional links would probably reinforce the economic benefice of group membership

the group would bring, an individual can act out of the group, but it can be at the expense of some other dimensions. Conversely, the presence of the group itself can interfere with one respect of self consistency, if the value brought by the group is big enough to motivate the individual to undergo self discrepancy.

In first analysis, this functional form for the utility implies a perfect substitutability between the component of utility. A "lossy" psychological comfort can be overcome by more money or group belonging <sup>12</sup>.

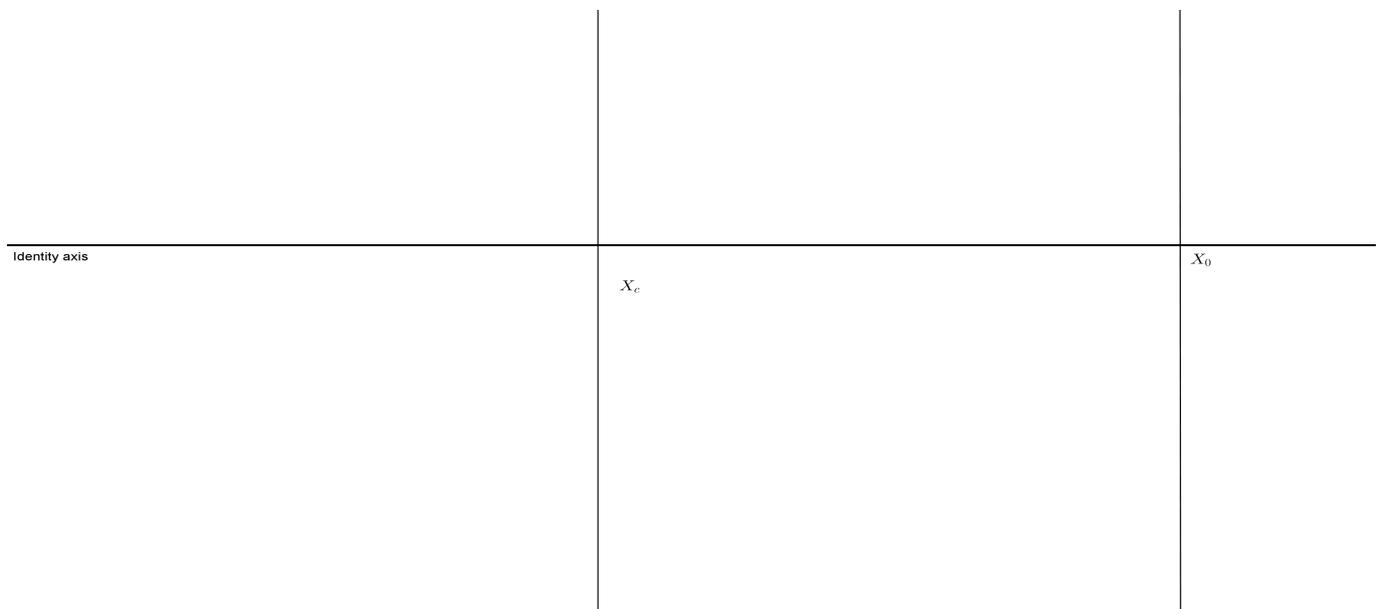


Figure 1: The individual and the group on the identity axis

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<sup>12</sup>This should be discussed, and we should see to what extent this is crucial for results and if an alternative formulation can be drawn. Maybe the different component of utility should integrate some complementarity.

## 1.2 The group

We consider an anthropomorphic group, that decides either to accept or reject a candidate to the group. The rule of decision is as follows :

$$G(x) = \begin{cases} 0 & \text{if } U_{\bar{i}}(X, X_c, \dots) > U_i(X, X_c, \dots) \\ 1 & \text{otherwise} \end{cases} \quad (2)$$

0 means the group doesn't accept in the candidate, 1 means it accepts him. Following Austen-Smith and Roland G. Fryer (2005), we assume that the group has a utility function, denoted by  $U(\cdot)$ <sup>13</sup>. Once again, this kind of rule indicate that the individual is not fully free to choose is position toward the group.  $U_{\bar{i}}(\cdot)$  denotes the utility of the group keeping the individual outside,  $U_i(\cdot)$  denotes conversely the utility of the group accepting the individual. The utility of the group depends on its inner norm;  $X_c$ , the choice of the individual when he is integrated, and some other component that can range from the monetary welfare of his members to their personal qualities. Such a decision rule will allow to account for the reluctance of the group to let its identity vanish. Integrating individuals that don't match the norms group will hurt it. It will also depend on taste for integrating individuals that bear social qualities, i.e. whose behavior in in se enjoyable for his peers. Other dimensions such as the impact of the individual on the discriminations the group suffers from will be allowed in this model. The acceptance rule from the group reflects at the same time wether an individual will be assimilated to the group, from an external point of view. This means that an individual, by choosing to act in a very outlying way, can indicate to the world that he shouldn't be assimilated to the group. So formulated, it allows integrate in our analysis inflexible groups, race or gender

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<sup>13</sup>To some extent, this rule could be interpreted in a different way, as the opinion of other people, not necessarily in the group, toward the individual membership in this group

related for instance. This means that groups are defined by social contingencies rather than unchanging hard necessities. We'll later on define some more precise decision rules for the group.

### 1.3 The principal

The principal decides to hire an individual for a given wage. This bid wage depends on the group membership of the individual.

$$W(G(X)) = \begin{cases} (1 - D(X_c, X_p))\tilde{W} & \text{if } G(x) = 1 \\ \tilde{W} & \text{otherwise} \end{cases} \quad (3)$$

$X_c$  denotes the norm chosen by the group.  $X_p$  is the inner norm of the principal. The assumption behind this is that the principal, or the one with whom the individual is contracting, discriminates the member of the group, either for "à la becker" reasons or for "à la phelps" reasons. In both cases norms trigger the distaste for the collaboration with an individual, or reinforce beliefs about the people's low abilities. The discrimination exists if and only if one is integrated in a group. We can think of it as the fact that, by integrating the group, an individual reveals some information about himself that triggers discrimination. Intuitively, the discrimination will increase when the norm of the group will get further from the norm of the principal.

Computing the equilibrium for the individuals is equivalent to resolve the following problem :

$$\begin{cases} \max_X V(X) = W(G(X)) + \alpha G(X) + \beta |X_0 - X| \\ \text{given equations (2) and (3)} \end{cases} \quad (4)$$

## 2 Outcome of the model with simple decisions rules of the group, and a passive principal

In the first place, we discuss the outcomes of the model giving following hypothesis :

We assume a simple decision rule for the group :

$$G(x) = \begin{cases} 0 & \text{if } |X - X_c| > d \\ 1 & \text{otherwise} \end{cases} \quad (5)$$

In this case, following (5), the group has a tolerance as regards to its inner norms. This tolerance is the area surrounding  $X_c$ , no further than distance  $d$  from it. The personal qualities of the individual are not taken into account, and he has no impact on the norms of the group. <sup>14</sup>

We assume as well a "*passive*" principal, that discriminates in the group, and doesn't discriminate outside of the group. What is implicit here is that the behavior of one individual cannot change the identity of the group, and have consequently no impact on the discrimination by the principal. This may be due to the size of the group.

$$W(G(X)) = \begin{cases} (1 - D)\tilde{W} & \text{if } G(x) = 1 \\ \tilde{W} & \text{otherwise} \end{cases} \quad (6)$$

In those circumstances, the individual chooses the identity action that maximizes his utility, through wage perceived, group belonging and self-consistency. We propose a intuitive solution : we compare the utility state inside and outside the group.

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<sup>14</sup>This may be related to the size of the group : if it is somewhat big, it wouldn't have its identity changed by accepting an additional member

The former equation (4) is the general case. *We consider only the case where  $X_0 \leq X_c$*  but the situation is symmetric with  $X_0 \geq X_c$ <sup>15</sup> and the relative position of  $X$  and  $X_c$  as no intrinsic value, no moral / welfare weight (this further means that  $X \leq X_c$ ).

To make it easy to compute, we distinguish two different cases :

We'll define an individual an *insider* when his inner norm lies within the acceptance area of the group ( $\Leftrightarrow X_0 \in [X_c - d; X_c]$ ). That's when an individual feels pretty close from the group he is related to. Had no discrimination existed, for sure he would have chosen to be member of the group. This situation is depicted in figure 2.

Conversely, we'll define an individual an *outsider* when his inner norm doesn't lie within the acceptance area of the group ( $\Leftrightarrow X_0 \notin [X_c - d; X_c]$ ). That is, he doesn't feel that close to the group, but he is anyway assimilated to it. With no discrimination, he would not even necessarily be member of the group. It would depend on the relative value of group and self consistency at his eyes. He nevertheless can accept the group membership for some reasons, such as a need for social connexions. This case is depicted in figure 3.

An underscript  $G$  (resp.  $\bar{G}$ ) refers to a situation where the individual is in the group (resp. out of the group). For each type of individual, either insider or outsider :

- For an *individual who is not in the group*, he'll choose a  $X$  that is as close as possible of his inner norm provided that he is not in the group.

– For an insider :

$$V_{\bar{G} \text{ insider}} = \tilde{W} - \beta(X_c - d - X_0) \quad (7)$$

We can't forget the case where an individual is close to the group but prefers staying outside to get away from discriminations. In this case, he will choose

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<sup>15</sup>this is true only in this setting

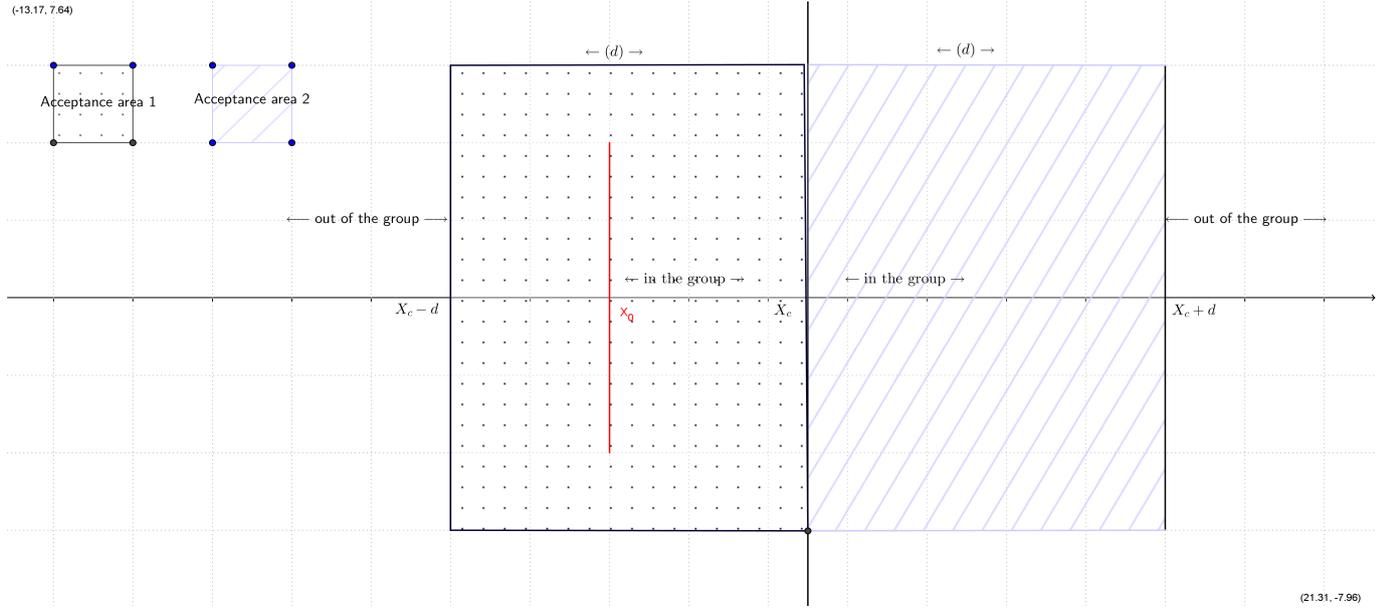


Figure 2: The insider on the identity axis

the action  $X$  that makes him as close as possible to his inner choice, provided that he is outside of the group. The contraing nature of social context is here explicit.

– For an outsider

$$V_{\tilde{G} \text{ outsider}} = \tilde{W} \quad (8)$$

Indeed, if the individual is an outsider, and if he is outside the group, he will necessarily choose is inner choice. (reducing the ego discrepancy]

- For an *individual who is in the group* : he will choose the actions that is as close as possible to his inner action provided that it is in the acceptance area. If his inner choice is in the acceptance area, he will choose  $X = X_0$ . If not, he will choose  $X = X_c - d$

$$V = (1 - D)\tilde{W} + \alpha - \beta|X - X_0| \quad (9)$$

Equation (9) changes with respect to the fact that the inner choice is in or out of the acceptance area of the group  $[X_c - d; X_c]$  :

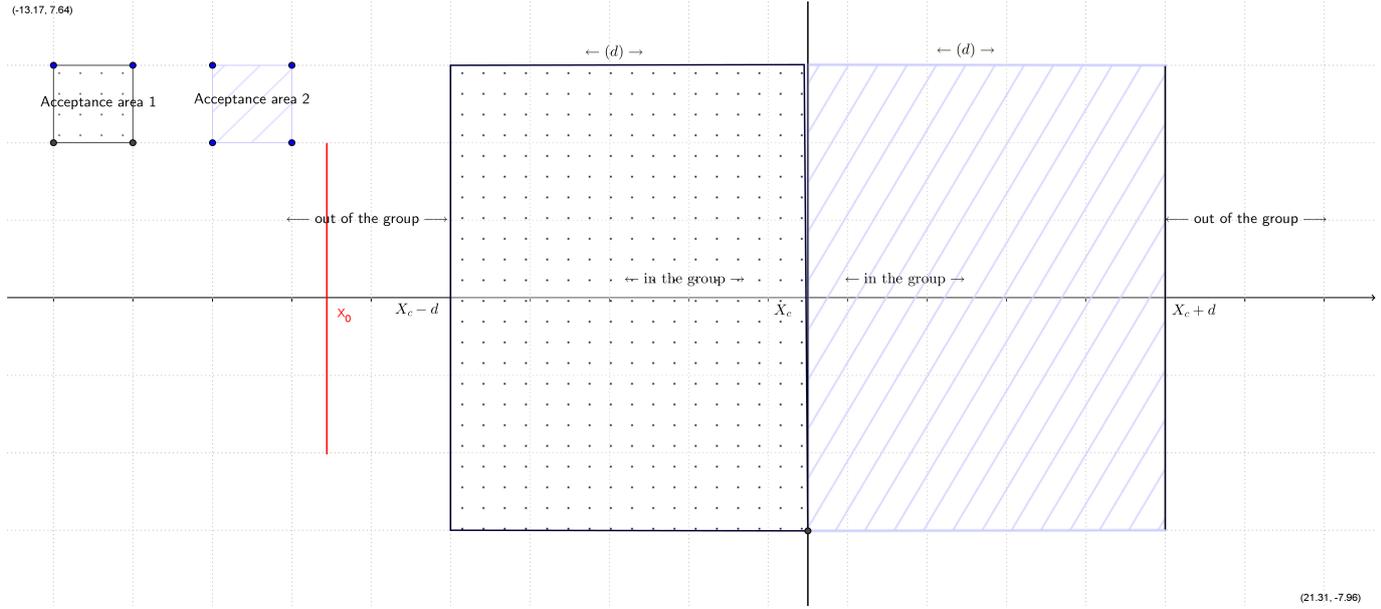


Figure 3: The outsider on the identity axis

- If he is an insider :

$$V_{G \text{ insider}} = (1 - D)\tilde{W} + \alpha \quad (10)$$

Indeed, for such an individual, provided that he opts in the group, his optimal choice is  $X^* = X_0$ . (But as we will see later, an insider needs not opt-in the group).

- If he is an outsider :

$$V_{G \text{ outsider}} = (1 - D)\tilde{W} + \alpha + \beta(X_c - d - X_0) \quad (11)$$

Indeed, if he's sure to be accepted as soon as he is in the acceptance area, and given that his inner choice is outside the acceptance area, he will choose the action  $X$  that's as close as possible to his inner choice provided that this  $X$  is within the acceptance area :  $X = X_c - d$

We sum up the possible situation in the following table 1: Now, we compute various

↓ Inner norm ↓	→ Choice →	$X \in [X_c - d, X_c]$	$X \notin [X_c - d, X_c]$
$X_0 \in [X_c - d, X_c]$		Insider, in the group	insider, not in the group
$X_0 \notin [X_c - d, X_c]$		Outsider, in the group	Outsider, not in the group

Table 1: sum-up of the situations possible

equilibrias for our two kinds of individual, insiders and outsiders. The computation will be intuitive, and to do so we'll have to add sequentially sets of assumptions that will help us drawing "ideal-type cases".

## 2.1 The outsider equilibria

We compute intuitively various equilibrias for outsiders, i.e. individuals whose inner identity is "not that close to the group identity standard". ( $\Leftrightarrow X_0 \notin [X_c - d, X_c]$ ). To assess the choice of the individual, we compare (11) and (8).

### 2.1.1 No discrimination for a normal outsider

First step, we set  $D = 0$ . The condition for a normal outsider to be in the group is as follows

$$\alpha \geq \beta(X_c - d - X_0) \quad (12)$$

Which yields no surprises, and exhibit a trade off between social identity and psychological consistency.

- the greater is  $\alpha$  (i.e. the value of belonging to a group) the greater will be the self-consistency sacrifice one will be willing to accept to enter the group
- The greater is  $\beta$ , the less one will accept to be in discrepancy to enter the group.

Intuitively, we represent an individual who has to choose an identity action, to satisfy his own consistency, and his social aspiration. If the value he gives to his own self-consistency is way higher than the one he gives to the social identity he gets, he will not accept to make the effort to enter the group unless the boundary of the group is close to his inner choice, hence  $X_c - d$  is close to  $X_0$ . Conversely, an individual who is very worried of his social integration (high value on group membership, high  $\alpha$ ) might suffer a high discrepancy.

### 2.1.2 Discrimination for a normal outsider

We take once again :  $D \neq 0$ .

$$\alpha - \beta(X_c - d - X_0) \geq DW \quad (13)$$

Here the monetary cost of being in the group,  $DW$ , as to be overdriven by the net psychological lift of being integrated :  $\alpha - \beta(X_c - d - X_0)$ , which is the value of being in the group net of the psychological cost engaged by an individual to show his closeness to the group, at the expense of his psychological consistency.

## 2.2 The insider equilibria

We compute intuitively various equilibria for insiders, i.e. individuals whose inner identity is "close to the group identity standard". ( $\Leftrightarrow X_0 \in [X_c - d; X_c]$ ). To assess the choice of the individual, we compare (10) et (7)

### 2.2.1 No discrimination and classical insider

We make an additional assumption :

- $D = 0$

So we have to compare  $\tilde{W} - \beta(X_c - d - X_0)$  and  $\tilde{W} + \alpha$ . Doing so, we find trivially that in absence of discrimination, an individual chooses to opt in a group if  $\alpha > 0$ . No further comments need to be done on this point.

### 2.2.2 Discrimination with a perfect insider

We make an additional assumption :

- We call a perfect insider an individual whose choice would be the exact choice of the group, that is to say  $X_0 = X_c$ .

So we need to compare  $\tilde{W} - \beta d$  and  $(1 - D)\tilde{W} + \alpha$ . This yields the following condition for the perfect insider to choose a level of  $X$  that brings him into the group :

$$d \leq \frac{D\tilde{W}}{\beta} - \frac{\alpha}{\beta} \quad (14)$$

Which is equivalent to :

$$\underbrace{\alpha}_{\text{gains of entering the group}} + \underbrace{\beta d}_{\text{consistency gain of entering the group}} \geq \underbrace{D\tilde{W}}_{\text{monetary loss of entering the group}} \quad (15)$$

Which needs not be always verified. This means that even an individual perfectly fitting in the group ideals can choose to stand at some distance to the group if this group suffers from too important a discrimination. This is a first possible strategy that one can pursue when categorized as belonging to a stereotyped-against group. Intuitively this would happen if the willingness to match own norms is not too high, that is when one doesn't feel much committed to his own norms. Or when the group value is nothing compared to the cost of discrimination, the loss of wage being more stringent than the

gain one can pull from the group. In this simple frame, thus, the individual may not act against discrimination by proving that the members of his group are "better" than what the principal thinks. This could need further development.

### 2.3 Welfare outcomes with discrimination

The introduction of discrimination in this simple framework is detrimental to individuals welfare, and this whatever the choice related to group, at the end. Results commented now are reported in table 2 for an outsider and table 3 for an insider

INITIAL SITUATION		
	IN	OUT
Ends-up IN	$DW$	not consistent
Ends-up OUT	$\alpha - \beta(X_0 - (X_c - d))$ 16	0

Table 2: Utility loss of introducing discrimination for an outsider

INITIAL SITUATION		
	IN	OUT
Ends-up IN	$DW$	not consistent
Ends-up OUT	$\alpha + \beta(X_0 - (X_c - d))$	not consistent

Table 3: Utility loss of introducing discrimination for an insider

For the *normal outsider*, if the discrimination is not too high, relative to group valuation, the individual chooses to stay in the group, and loses  $DW$  for a  $D$  level of discrimination. Conversely, an individual may choose to fly away from the group when it becomes discriminated. This would arise with a high discrimination combined with a relatively high need for consistency. This does not rule out the downside effect of discrimination on individual : the choice of staying out of the group is not a first best choice, but rather a constrained choice, due to discrimination. This case arises when  $D$  becomes

high enough to override psychological and social benefits of group membership.

For the normal insider, the idea is the same, when introducing discrimination, any insider would suffer either a monetary loss of  $DW$  if he decides to stay in the group. But this time the non-monetary loss, for an individual who decides to fly away from the group, will include the social dimension loss, and the psychological discrepancy loss.

This straightaway way of putting things helps fix the idea that not only directly discriminated individuals suffer from discrimination, but as well people who are categorized with a discriminated group and have to incur a cost to stay at some distance from this group. An example is that a woman who reaches top responsibilities at odds with the stereotypes has not managed to avoid discrimination but rather suffers an additional cost relative to her male competitors, to prove the stereotypes weighting on women may not be extended to her. This is in line directly with the fact that, for an individual, the social categorization is partly undergone as opposed to chosen.

## **2.4 Possible scenarios when the tolerance of the group varies**

The aim here is to assess the effect of variation of " $d$ " which captures the tolerance of the group, in terms of maximal distance one can stand from the group in order to be accepted in.

	Outsider		Insider	
	In the group	Out of the group	Out of the group	In the group
$\Delta^+ d$	Rise in welfare for the individual : he can stay in the group meanwhile choosing an $X$ closer to his $X_0$ : he needs less sacrifice to get in the group <b>+</b>	Either no effect if the psychological cost is still too high to enter the group, or a positive effect through a reduction of psychological welfare overdriven by the welfare due to integration in a group <b>null or -</b>	No effect : the individual needs not deviating from $X_0$ <b>null</b>	Negative effect : to stay out of the group and avoid discrimination, one is obliged to choose an $X$ even more remote from his $X_0$ . For individuals whose group value $\alpha$ is higher, he can enter the group, but suffering from discrimination <b>-</b>
$\Delta^- d$	Negative effect : either the individual has to bear a cost in terms of $\beta(X - X_0)$ to stay in the group, or he becomes excluded from the group, at the expense of the utility related to group membership <b>-</b>	No effect : the individual needs not deviating from $X_0$ <b>null</b>	If the individual stays an insider, no effect (individual in the very close neighborhood of $X_0$ , but if he becomes an outsider, he suffers either from psychological discrepancy ( $\beta(X - X_0)$ ), or from social loss ( $\alpha$ ) <b>null or -</b>	Positive : if the individual becomes an outsider, he can choose $X = X_0$ , and if he stays an insider, he'll choose a $X$ that's closer from $X_0$ <b>+</b>

### 3 Insights into a more flexible model

We keep the same overall structure of the model, but this time, we specify a more complex behavior of the group and assume that the principal as well has inner norms, that impacts his discriminatory behavior. The aim is not to find an equilibrium, but to give some insights of the additional results such a decision rule would give. The situation is best depicted in figure 4. In the first place, we consider that the principal, and the group, have totally oppositional norms, which implies that they can be depicted in the two edge of identity axis. We further put that  $X_c = X_0 = 0$ .

For the group :

$$U = \sum_{j=1}^n \gamma_j + NW(1 - D(X_c)) + \tau(X_c) \quad (16)$$

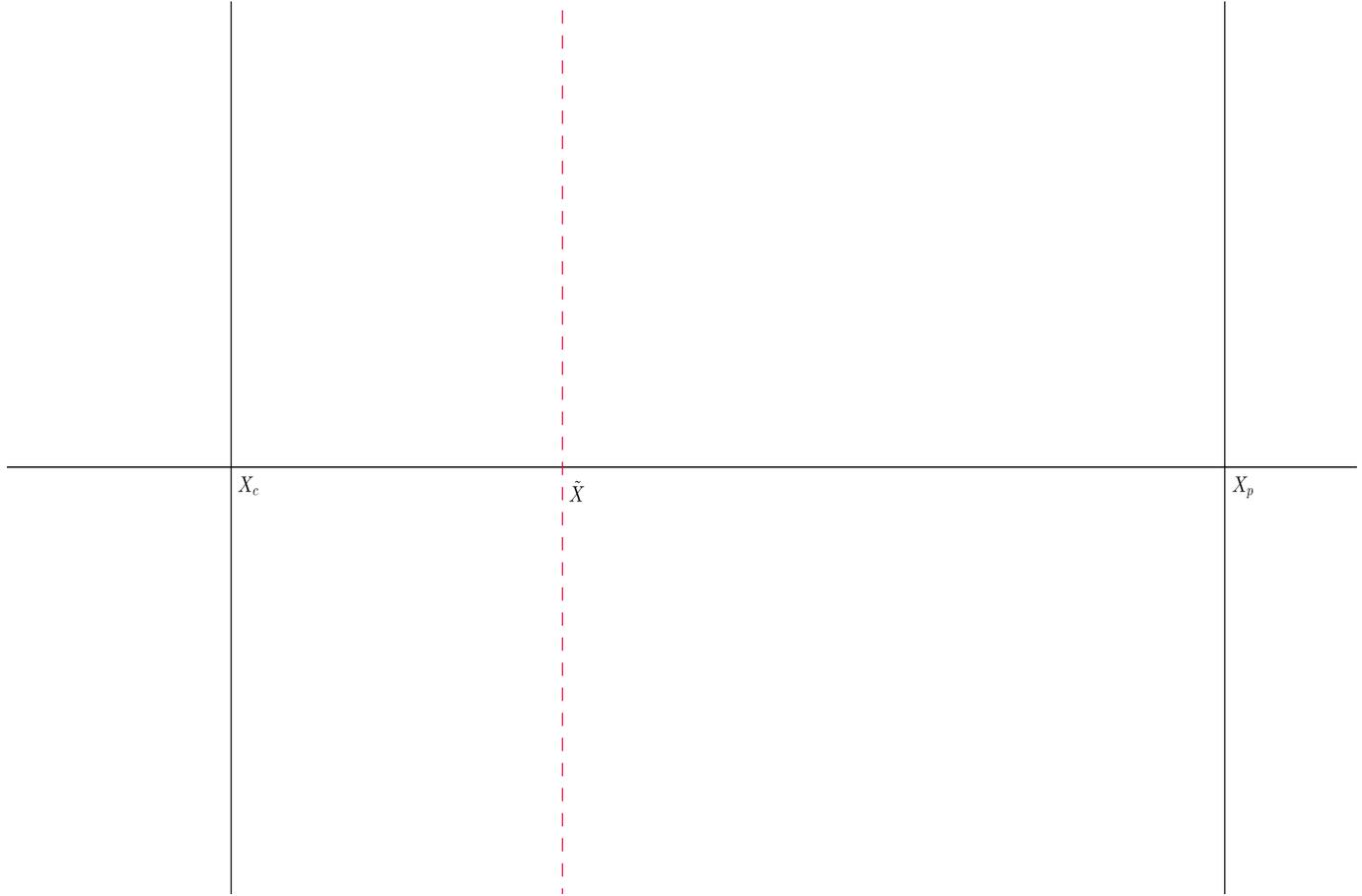


Figure 4: The situation

(16) gives the utility of the group, when the individual is not accepted in.  $\gamma_j$  is the personal qualities an individual  $j$  is endowed with.  $NW(1 - D(X_c))$  is the monetary component of the utility,  $\tau(X_c)$  the identity related utility.

When the group accepts an extra individual, it modifies its identity which repercutes on discrimination and purely identity related satisfaction :  $X_c$  becomes  $X_c(X)$  where  $X$  stands for the choice of the individual.

So, integrating the extra individual, the utility of the members of the group becomes defined by the new norm  $X_c(X)$ . Nevertheless, the acceptance rule is defined by the welfare implication of acceptance, but only for the members that are already in the group. To some extent, they "vote" to accept in an individual, and the opinion of this

individual on whether he should be accepted is not taken into account<sup>17</sup>. So the rule is that the individual is accepted if and only if the additional welfare for the ( $n$  prior) members of the group is positive :

$$G(X) = \begin{cases} 1 & \text{if } \sum_j^n \gamma_j + \gamma_i + (1 - D(X_c(X)))WN - \tau(X_c(X)) \geq \sum_j^n \gamma_j + (1 - D(X_c))WN - \tau(X_c) \\ 0 & \text{otherwise} \end{cases} \quad (17)$$

Before accepting an individual, we can assume that  $\sum_i^n \gamma_i = 0$  which is not of great importance : it will have no impact on the choice of accepting an individual. Moreover, we assume that  $\tau(X_c) = 0$  since the agreement between the member becomes the new norm, and the cost of accepting an individual is the cost of changing identity norm. The cost can be thought of as only temporary, and transitional. In fact, the identity cost for the group is a cost of deviating from so-far standing norm. Taking this into account, (17) rewrites :

$$G(X) = \begin{cases} 1 & \text{if } \gamma_i + (D(X_c) - D(X_c(X)))NW > \tau(X_c(X)) \\ 0 & \text{otherwise} \end{cases} \quad (18)$$

The equation (18) displays clearly the cost / benefit analysis conducted by the group : the cost of accepting the individual  $i$  is on the right part, and is the cost of identity loss, and the benefits are on the left part, accounting for monetary benefits, and personal qualities benefits. To this point, we see that the group would agree to accept in an individual that is further from his norm if this one provides higher personal qualities. Intuitively, an individual provided with attractive qualities might have to do more to self-exclude from a group that he doesn't want to be assimilated to.

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<sup>17</sup>It's here again an assumption, but that is acceptable if we think that the individual would vote strategically

The principal has a more flexible behavior since the discrimination  $D$  becomes a function depending on its inner norm  $X_p$ , the norm of the group  $X_c$  that eventually depends on  $X$  if the individual is accepted in. If we consider an axis such as : figure 4 we can assume that :  $D'(X_c) < 0$  and  $\frac{\partial D}{\partial X} = X'_c D'(X_c) = \frac{1}{N+1} D'(X_c) > 0$ . Defining the rule for discrimination in this manner is not neutral. We formerly indicates that the identity choices are not linked with moral or productivity issues. That means that the principal discriminates individuals that that part into a group that is far from his own norms because he prefers working with people who share more similarities with him, for instance for at work "well-being" issues.

In this setup, to gather outcomes of the model, we define as in the former part "insiders".

### 3.1 Outcomes for a perfect insider

As said before, an insider is an individual whose inner norm is perfectly matching the one of the group is linked to :  $X_c = X_0$ . He has to choose which identity action to take, within the axis  $[X_c; X_p]$ . This choice will take him either to be accepted in the group, or to be kept out of the group. When the individual is out of the group, he chooses  $\tilde{X}$  which is the level that brings him a maximum utility provided that he is standing aside of the group. Straightforwardly :

$$\tilde{X} \text{ such as } U(\tilde{X}) = 0 \tag{19}$$

Choosing any other  $X$  that make him outside of the group would harm him even more in terms of identity, since he'll have to get further from  $X_0$ , having no additional gain in terms of discrimination since discrimination are group related

On the other hand, if the individual wants to opt in the group, he chooses  $X = X^*$  such

as to deal with :

$$\begin{cases} \max_X V(X) \\ st \ U(X) \geq 0 \end{cases} \quad (20)$$

We suppose that there exists a  $X^*$  that maximises equation 20, such as  $X^* < \tilde{X}$ , which means that, du to the carecteristics of both the group and the individual, the optimal choice should lead to be accepted in the group.

$X^*$  will satisfy :

$$\beta = -\frac{\partial D(X_c)}{\partial X} \frac{\partial X_c}{\partial X} W \quad (21)$$

Getting a step further from the inner norm will cost more to the psychological comfort than the lower monetary discrimination could compensate. Indeed, on the left part is displayed the marginal cost that must not exceed what he gathers from his impact on discrimination. The strongest the need for psychological consistency, the lower will be the effort to change the identity group, all things being held equals. Equation 21 also accounts for the sensitivness of the principal to the group's norm through  $\frac{\partial D(X)}{\partial X}$ . And for the impact of the individual on the norm of the group, through  $\frac{\partial X}{\partial X_c}$ . This might lead us to extent or model to leadership related issues in further work.

## Conclusion

The idea of the previous was to think about the reaction of the discriminated against the discrimination he undergoes. We took the perspectives of social identities, and personal consistency has leverage against discrimination. This led us to built a simple model that posits that, if discrimination can be escaped from, it would probably be not only at the expense of social situation, but also of one's inner aspiration. In this sense, discriminated

would manage their identity by squirming to fit the discriminator's views. Although not totally new, we believe that the reaction of the discriminated have been widely ignored, limiting its role in the economic analysis of discrimination. We also think that it could be fruitful to enter in many more details, to get a first understanding of this question, and to be able to picture the phenomenon of discrimination in a more complete way.

Indeed, we've so far focused on a set of possible answers that a discriminated can lead to fight discriminations. They are related to the management of identity, how this is tinkered to get better off. That's why we formerly mentioned identity management, as an answer to discrimination. But one can think of other answers that can be given to discrimination. It wouldn't be absurd that discrimination has an impact on the discriminated willingness to work, and productivity. That is to say that under certain circumstances, instead or cumulatively with the identity management, a discriminated person will set his level of effort to change the principal mind or at least to compensate. This would go in a new direction as regard to the theory of fairness.

In this set of alternative way of thinking to our question, another is worth noting. In a more psychological orientation, individuals are considered to assimilated with groups. But the real emphasize might be on the group they filled associated with. Put differently, this would imply that it's not the signaling value of the identity choice that matters that much, but the personal feeling toward groups. For instance, an individual who is victim of discrimination can "chose" to compare only to most discriminated, rather than privileged ones to lower his bad feelings about that. Discrimination would lead to less stringent reaction, although would impact the psychology of the discriminated.

## A Sum-up table of the baseline model

		choice of the individual	utility	example
Insider	in group	$X_0$	$(1 - D)\bar{W} + \alpha$	Discrimination are not high enough to overcome the benefits to be in the group. He feels close to the group, and accepts being discriminated for that.
	outgroup	$(X_c - d)^-$	$\bar{W} - \beta(X_c - d - X_0)$	Here, the discriminations are too high. The individual doesn't which to stay in the group, so he advisedly decides to set apart from the group.
Outsider	ingroup	$(X_c - d)^+$	$(1 - D)\bar{W} + \alpha - \beta(X_c - d - X_0)$	The outsider in the group denots of a concern about integration that overcomes the psychological and monetary costs of getting in the group.
	Outgroup	$X_0$	$\bar{W}$	This could denot either a high level of discrimination, or a willingness to stay alone, and follow proper way.

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