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Discrimination as Focal Point: Markets and Group Identity

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Abstract

This paper presents a theory of discrimination for markets in which there are complementarities between different tasks. It is shown that, in such a setting, even when groups are *a priori* identical, employers will end up discriminating against certain groups. Group discrimination serves the purpose of creating a focal point in a market game. In this model, the free market, far from curbing discrimination, nurtures it, and thereby creates the need for purposive policy intervention. It is argued that with the rise of technology the problem of discrimination as focal point will get more acute and we will have to think in terms of affirmative action or a system of taxation and subsidy to support groups that get excluded.

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1. Introduction

For good or for bad, group identity matters in determining market outcomes (Akerlof and Kranton, 2010, Sen, 2006). Discrimination against certain groups of people and, by its converse, in favor of other groups has been common practice, observed in different societies and through different periods of history. India's caste system, with its attendant practice of intolerance and effort to marginalize large groups of people, is an example, as is the history of apartheid in South Africa and racial discrimination and slavery in the United States. From an analyst's point of view, they are often troubling because norms and laws often merge into each other. Some of these heinous practices were explicitly backed by the law as in the case of South African apartheid and US slavery. At other times, such as with India's caste system through history and now (see Deshpande, 2010) or with racial discrimination faced by African Americans in contemporary USA, it was not backed by the law but by social norms, customs and individual beliefs and preferences. The focus in this paper will be on discrimination which does not have the backing of law

As a mirror image of this, we often see certain groups benefiting from discrimination in their favor. This has been true of men through long stretches of history and even now in most societies. Similarly, in the United States, United Kingdom, in India during colonial times or South Africa till recently, if you could choose your skin color, I would strongly recommend white. Where do these discriminatory preferences come from and why have they been so persistent?

Without doubt there must be many explanations for this, ranging from plain, simple bigotry and prejudice, to various forms of statistical discrimination that economists have written extensively about¹. While not wanting to take away from those standard explanations, this paper presents a novel argument whereby discrimination has no innate origins but arises naturally in markets where there happens to be some complementarity between the different tasks we do². This kind of discrimination is a product of the free market and the beliefs of ordinary people. The upshot is the group identities of people come to matter in such settings. It is, as I will show, closely linked to the idea of 'focal point,' used in game theory (Schelling, 1960). In particular, race, caste and gender becomes important in equilibrium because they acquire the salience of the focal point.

In some ways, the focal point theory of discrimination developed in this paper is more alarming than other forms of discrimination where one can point to the source, be it human mendacity or the distortions of statistical information. In my analysis removing government interference and allowing competition in the market to flourish does not remove discrimination, as standard economics had suggested, because it is in fact a product of precisely the free market.

¹ See Arrow (1973, 1998), Phelps (1972), Spence (1974), Stiglitz (1974).

² A polar case of this in a development context occurs in Kremer (1993).

The model is based on sufficiently realistic assumptions to make me believe that, while other forms of discrimination no doubt occur, the focal point theory of discrimination does play an important role and, as such, deserves greater attention. In the last section I will argue why, given trends in contemporary labor markets, this is likely to become even more important.

2. Markets and Discrimination

A good starting point is the celebrated paper by Bertrand and Mullainathan (2004). This is often treated as the most compelling empirical demonstration of pure racial bias in labor markets. When we see discrimination, the question always arises as to whether it is bias or reflection of something else that correlates with race or gender or caste, whatever it is one is studying. Thus if an employer hires more whites than blacks, is it really a preference for whites, or is it merely a reflection of the fact that the employer needs PhDs and white job applicants are more likely to have PhDs? Bertrand and Mullainathan corrected for this by sending out job applications with fictitious resumes to help-wanted advertisements that appeared in Chicago and Boston newspapers. It was soon evident that, controlling for all other things, candidates with white names were far more likely to get callbacks for interviews than those with black names. There were striking results, such as how having a white name is equivalent to 8 years of work experience with a black name. In brief, they had engineered the celebrated “*ceteris paribus*” condition that traditional economists so often talked about but were seldom able to demonstrate. And the findings were striking³.

What I wish to do here is to question whether this necessarily demonstrates racial bias. Note that for most tasks in life, to conduct them effectively, you need to successfully do other tasks. If you work for a firm’s sales department to promote sales, you need to be able to successfully interact with buyers’ groups and delivery services units. If the buyers’ groups and delivery services units try to shun you, you will not be able to do the sales work you are supposed to do well. And of course the problem is similar for the buyers’ group. When they reach out to you they know they will get better services from you if you are trusted and used by the sales department and the delivery services unit. And likewise for the delivery services unit. They have to gauge how successful you will be with the sales department and the buyers’ group. This is where race can come to acquire significance even in the absence of any innate racial preference. If you feel Emily—a common white name—is more likely to do your task more effectively, you will prefer to hire Emily over Lakisha. If all three units do that, this becomes self-fulfilling. The white name

³ Similar results were reported by Siddique (2008) who sent out applications in India using caste-based names. A paper by Thorat, Banerjee, Mishra and Rizvi (2015) does a similar test for the home rental market in the National Capital Region, in and around Delhi, and record a similar bias against Muslims and Dalit applicants. For empirical studies, using other methodology, which nevertheless suggest pure racial bias, see Hamilton et al (2015) and Pager, Western and Bonikowski (2009). For some engaging research based in legal analysis, see Sander (2006) and Coleman and Gulati (2005).

provides a focal point in a labor market for tasks that exhibit ‘strategic complementarity’—economists’ term for work contexts where doing one task raises your productivity in another.

Since my paper is a methodological intrusion into that rather barren terrain between economics and sociology, and is, at the same time, at deviance from the so-called Chicago school, it may be apt to quote Ken Arrow from an interview he gave to Richard Swedberg in 1988, in which he distances himself from the Beckerian approach but stresses the importance of interaction between economics and sociology: “[A] lot of the environment in which economic transactions take place is social and historical in nature. I do not know exactly how to fit these pieces together but there are, for example, accounts of how special groups have played a distinct role in, say, trade. You have Chinese middlemen in Asia; Jews at certain times; Quakers during one period; and so on. It is clearly their social characteristics that matter.” (Swedberg, 1990, p. 136-7). What I am arguing is that this is true but the social characteristics may well be endogenous, the product of equilibrium, however we got there.

The basic idea, which shows the relation between discrimination and focal point, can be illustrated with a simple example⁴. There are two entrepreneurs, 1 and 2, who have need for certain tasks to be done, and there are n (>2) service operators or laborers who can do these tasks. Suppose, for instance, entrepreneur 1 needs a person to look after his lawn—buy and apply fertilizer, sow seeds, mow, and so on; and entrepreneur 2 wants to lend money to someone. The person who is able to borrow the money, can buy fertilizers and seeds easily and so do the lawn work better. And the laborer who gets the lawn contract will be more likely to pay back loans that she takes. The entrepreneurs do not know the underlying causation of what makes a laborer more productive, to wit, the fact that if both reach out to the same laborers, they get better value. This is not unlikely in a real setting where thousands of entrepreneurs reach out to hundreds of thousands of laborers. They realize some are more productive than others and may search for markers of that without quite knowing the fundamental model that drives this.

The above paragraph may be summed up as follows. Each of the two entrepreneurs picks one citizen for the task he needs to get done. If he picks a citizen who is not picked by the other entrepreneur, he gets a benefit of x and if he picks someone the other entrepreneur also picks he gets y . Given what we said about strategic complementarity,

$$y > x \tag{1}$$

The entrepreneurs are not aware of this strategic complementarity. All they know is that they may get x or y , without being aware of what drives the difference. The only critical assumption in this exercise is (1). All other structures of the model can be varied and we will still get the same essential result. I should clarify that I am not claiming that strategic complementarity is always the case but simply that it is realistic in many situations, and when that happens, I want to show that a kind of discrimination happens which requires no innate bias, no differences in ability or

⁴ A more complex and also more realistic model is developed in Basu (2015).

skill across groups and arises entirely through natural market processes with the concept of the focal point playing a critical role.

To convert this to a game I need to put in a little more structure to the model. Assume that the n laborers are of two different races: w (>1) of them are whites and b (>1) blacks. Hence $w + b = n$. Each entrepreneur, in selecting a laborer to get his or her task done, has to use one of the following rules: No discrimination (strategy N), discrimination in favor of whites (strategy W), and discrimination in favor of blacks (strategy B). If she chooses N, it means she randomly picks one of the n citizens, with $1/n$ probability of each citizen being chosen. If she choose W, it means each white person faces a probability $1/w$ of being selected. Likewise for strategy B.

It is easy to work out the payoffs of the two entrepreneurs depending on the choice each of them makes. This is displayed in the payoff matrix described below, in what I call the Discrimination Game. Since it is completely symmetric, there is no need to show the payoffs of both entrepreneurs. I show the payoff earned by entrepreneur 1; and, in this game, entrepreneur 2 gets the same.

Game 1. The Discrimination Game

	N	W	B
N	$\frac{y}{n} + \frac{x(n-1)}{n}$	$\frac{y}{n} + \frac{x(n-1)}{n}$	$\frac{y}{n} + \frac{x(n-1)}{n}$
W	$\frac{y}{n} + \frac{x(n-1)}{n}$	$\frac{y}{n} + \frac{x(w-1)}{w}$	X
B	$\frac{y}{n} + \frac{x(n-1)}{n}$	x	$\frac{y}{n} + \frac{x(b-1)}{b}$

To understand the payoff, let us check the top left hand box. Both entrepreneur chooses N, that is, pick a laborer with no attention to race. After one has chosen, the probability that the other person will choose the same laborer is $1/n$. When that happens, each gets a payoff of y . The

probability that the other entrepreneur will choose someone else is $(n-1)/n$. When that happens each gets x . So the expected payoff is $y/n + x(n-1)/n$. It is easy to work out the payoffs in the other boxes by a similar reasoning.

It is simple to check that this game has three Nash equilibria: (N, N) , (B, B) , (W, W) , that is, no one discriminates, everybody discriminates in favor of whites, and everybody discriminates in favor of blacks. To check this, note that if the other person chooses N , no matter what you do you will get the same payoff. So you cannot do better by unilaterally deviating from N . Next check that, as long as y exceeds x , as assumed, and given that, by definition, $n > w$, the following are true:

$$y/w + x(w-1)/w > y/n + x(n-1)/n,$$

and $y/w + x(w-1)/w > x.$

In other words, if others discriminate in favor of whites, whites will be on average more productive and so it is in your interest to choose a white to do your task. In other words, (W, W) is a Nash equilibrium. For the same reasons, (B, B) is an equilibrium as well.

For those with an aversion to symbols, let me convert the above game to a society in which there are 4 laborers, 2 whites and 2 blacks. And suppose $y = 2$ and $x = 1$. By inserting these values, the above discrimination game collapses into the special case illustrated below.

Game 2. The Discrimination Game: A Special Case

	N	W	B
N	5/4, 5/4	5/4, 5/4	5/4, 5/4
W	5/4, 5/4	3/2, 3/2	1, 1
B	5/4, 5/4	1, 1	3/2, 3/2

The three Nash equilibria are now obvious. If others discriminate, you had better do the same. But as always with games with many equilibria, there is a need for a focal point which allows players to coordinate their behavior. What I am claiming is that in markets with strategic complementarity, as just described, race or gender or caste can be the focal point. It is important only because others think it is important. You prefer Emily to Lakisha not because you have a

preference for white over black but because all of you need to zero in on some group and it so happens, for reasons of history or whatever, you have settled on whites.

One important implication of this is that one popular view, namely, if you leave it all to the market, with no government regulations and intervention, racial and caste discrimination would go away, is not valid. Discrimination arises from the free market. If you want to stop discrimination, you may, in fact, need regulation, and conscious affirmative action. And when we go for affirmative action we must not indulge in the politically correct banter, so often heard, that by doing affirmative action you do not hurt your returns. The truth is that your returns may indeed be diminished by such action. The appeal has to be that even if your return drops, there are certain actions in life which ought to be indulged in for its innate moral goodness. Affirmative action may be one of those. I shall return to this in the last section.

3. The Art of Creating Optimal Groups

As a digression I may point out that this focal point model of discrimination can be put to some rather Machiavellian uses, such as that of creating your own group and then promoting it. And indeed, such practices are not unknown in the world. Alumni associations and fraternities are good examples of this. They are often used to promote the college or frat label. Thus we are told how Harvard students are smarter than others, or how Berkeley students are more productive than others, or how Cornell graduates are more creative than others (this one happens to be true), and so on. What the analysis in this paper shows is that, once such beliefs catch on, they can become self-fulfilling because that belief then serves as a focal point.

Most of us, human beings, have multiple identities, race, nationality, language-group, ethnicity, gender and so on (see Sen, 2006), and as I just argued we can also create new identities (see also Basu, 2011). Now. If you want to deliberately nurture the view that one of these identities is a mark of greater productivity, this model suggests it may be worthwhile to pick on or create a group that is relatively less populous.

To prove this, consider the payoff an entrepreneur gets from the equilibrium in favor of whites. This is given by $[y+(w-1)x]/w$. The payoff in an equilibrium in which blacks are favored is given by $[y+(b-1)x]/b$. Let us call the former whincome, and the latter blincome. Recall $b = n - w$. Hence, as w becomes smaller, whincome rises and blincome falls. Both (W, W) and (B, B) are still Nash equilibria but the former becomes more and more dominant as the white population becomes smaller. In brief, if you want to promote the idea that a particular group you belong to is more productive, you will be better off if you choose a small group. Among other things, this explains why raising the profile of women is such a hard task. They constitute roughly half the population.

Considering the case of nationalities, if you promote the idea that the British are more productive and the idea that Chinese are more productive and people buy into this belief, the British will turn out to be even more productive in a world in which they are believed to be more productive

than the Chinese will be in a world in which the Chinese are believed to be more productive. There is often surprise expressed at the fact that Britain was such a small nation that once ruled virtually the world. What is being said is that we should not be surprised.

One counter argument to this needs to be kept in mind. If smaller groups are more effective, why not go all the way and proclaim that you as an individual, or one-person group, is more productive? The reason must be that as groups get too fragmented people cannot hold information about group characteristics in their heads because there are too many groups. This can set a lower bound to how small groups can be without losing advantage. To model this formally will entail a more elaborate analysis but the intuition behind what I am arguing should be evident.

In closing this section, I want to remind the reader that while this focal point model of discrimination is very important, as with all theory, to take it to the real world and to put it to use, we must enrich it with our commonsense and reasoned intuition⁵. Hence, the above theory must be combined with other ideas and our own experience before it is put to use or employed in designing policy. It is, for instance, worth reminding ourselves that productivity and even intelligence are also dependent on how a person is treated, on how society views this person's group. Even if the discrimination is purely a focal point at work, it can leave scars on people, making the ones believed⁶ to be less intelligent actually behave less intelligently. Unlike in a strategic-form game where a switch from one equilibrium to another can be effected in the twinkling of an eye, in reality, these changes are likely to take time and involve economics and psychology.

4. Policy Implications

The model presented here opens up some policy dilemmas. It should be evident from the above model that GDP or the aggregate payoff earned by all is higher when there is group discrimination. Since a certain amount of multi-tasking enhances productivity, it is better to have a subset of the population multi-task, that is, do all the work, rather than spread tasks thinly across all. Some people may find this result troubling, namely, the fact that discrimination against a group can enhance GDP. In my view, this result is disturbing only if you consider a higher GDP to be sacrosanct. All this result suggests is that you should be willing to forego some GDP to achieve fairness and greater equity across groups.

⁵ It is not a matter to go into here but this reference to commonsense and 'reasoned intuition' is not a casual side remark. I have argued at length elsewhere that for science to be useful we must combine it with these skills. Pure analysis of data or pure theory cannot help us help the world till we combine them with reasoned intuition (Basu, 2014).

⁶ Among the most notable findings on this are studies by Ambadi, Shih, Kim and Pittinsky (2001) and Hoff and Pande (2006). See, also, Field and Nolen (2005), Hoff (2015) and World Bank (2015).

Stewart (2005) pointed out that, in contrast to vertical inequality (that between persons), the normative economics of horizontal inequality (inequality across groups), remains a rather neglected subject. Exactly how one develops this and characterizes the various trade-offs between aggregate well-being and horizontal equality can matter a lot in how choices are made, as we just saw (see also Jayadev and Reddy, 2011, and Subramanian, 2011). Fortunately, the context is simple enough in the discussion that follows that the exact trade-offs will not matter but this is indeed a subject that deserves greater attention in the future.

With this in the background, note that there are two ways of achieving equity or an equitable distribution of incomes or payoffs in the present model. The first is straightforward 'affirmative action.' Incentivize employers to choose a diverse workforce so that the total work is spread equitably across all individuals. The second is to let a limited number of people do all the work and then tax them and subsidize those who did not get work. This latter will result in a higher per capita income since the workforce (that is, the people who find work or are called upon to do tasks) will be more productive.

There are social scientists who have objected to the latter on the ground that work in itself gives people dignity; so even if one were to get the same ultimate income but without having to work, this may cause a diminished sense of self. I prefer to be cautious with this argument. Through history there have been the leisure classes—the British landed aristocracy, the Indian Zamindars (a brainchild of the British landed aristocracy)—who did precious little work and lived lives of luxury, and there is no evidence of them feeling diminished by the experience.

There are also cases, especially relevant to women, where voluntary non-work is, in fact, a statement of empowerment and an act that enhances agency (Alaka Basu, 2016). Basically, what people need is a sense of legitimacy for what they earn. There are contexts where to get a dole without getting to work is offensive; it is like being told that you are not fit for work. This never troubled the aristocracy and the leisure classes because they had a sense of entitlement for their ample incomes, even though where that entitlement came from is a puzzle. In a world where, either one group gets to work or the other does, and there is no essential *a priori* difference between the two groups, for one group to work and the other to be subsidized is a legitimate strategy. Someone has to not work to make those who work more productive; in this setting there is no indignity in not working. It is in fact a contribution to society.

There is no need to resolve the policy dilemma in this paper but I want to point out that this problem is going to get more acute, since with the march of technology, relatively-unskilled work is steadily shrinking in the world. The share of GDP that accrues to workers as aggregate wage bill has been falling over the last four or five decades. The trend is quite alarming. As I point out in Basu (2016), in 1975, total wage bill as share of GDP in United States, Japan and the European Union, were 61%, 77% and 66%. Now they are 57%, 60% and 56%, respectively (see also Karabarbounis and Neiman, 2014). This trend is true almost without exception in all high and middle income countries; and this is a challenge we will have to face up to sooner rather than later.

What the model developed in this paper tells us is that we face a choice--whether to forcefully distribute the limited work thinly across the entire labor force (thereby impairing productivity) or let few people work (and be productive) and then tax them to subsidize the ones without adequate work and with all the time in the world to read philosophy and swim.

In itself, the advance of technology is a matter for celebration. What makes it worrying is that, as machines and robots displace workers, the incomes of workers become profits for the owners of the machines and the robots. I have discussed in Basu (2016) how we need to take on this problem head on. What this paper points to is an additional problem. As work becomes scarce, in markets with strategic complementarity, there will likely be an exacerbation in the problem of group discrimination, with large groups being kept out of the labor market. This paper provided an explanation of the mechanics of how this will happen and drew attention to the kinds of policy questions that, sooner or later, we will have to confront.

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