Norms of Mediocrity - Tall Poppies and the Law of Jante

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Abstract

Some social norms are generally perceived to be bad, but nevertheless seem to emerge under diverse circumstances. This paper examines norms punishing success. Such norms appear on a broader scale in Scandinavia, Australia and New Zealand, and in different groups, e.g. the norm against acting white, or contexts, e.g. nerd harassment or rate busting norms. The paper examines a simple model of social competition with mediocrity norms, where agents differ in ability. Mediocrity norms, as modeled in the paper, reduce average effort but lead some groups to increase effort. Aggregate welfare may be increased, but the effects differ between groups and agents with high, but not exceptional, productivity may well suffer most from such norms. The paper concludes with a discussion on norm formation.

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1 Introduction

Ask any Scandinavian about social norms in their part of the world, and the "Law of Jante" is bound to come up. Codified by Danish-Norwegian author Aksel Sandemose in his 1933 novel *En flyktning krysser sit spor*, which deals with the repressive communal mentality in the fictional small Danish town of Jante, the "Law" may be summarized as saying "You should not believe that you are better than us." The norm is thought to discourage individual initiative, having aspirations beyond one's proper station in life, and, in general, achievement. Nobody will own up to actively *enforcing* it, yet most people think 1. that it *is* in force, and 2. that this is a deplorable state of things. (See, e.g., Johansson Robinowitz and Werner Carr [14].)

While Scandinavians often think they are unique in being stuck with this unpleasant and inexplicable social institution, similar ideas are found in other cultures and communities. In Australia and New Zealand, the "Tall Poppy Syndrome" (a reference to the Roman proverb that says that "The tall poppy gets its head cut off") makes people enjoy seeing celebrities topple from their lofty perches[1] (see Feather [5, 6]). Among American blacks there are norms against "acting white" (see, e.g., Austen-Smith and Fryer [1]). Deaf people must contend with the "crab theory" (a reference to the alleged practice of crabs being boiled in a pot of pulling back in individuals who try to escape) (see, e.g., DeLora [3]). "Nerds" have to put up with harassment from their peers in schools (see Bishop, Bishop, Gelbwasser, Green and Zuckerman [24]). And *everybody everywhere* despises the *nouveaux riches*, the *arrivistes* and *parvenus* and other successfully upwardly mobile persons.

Apart from being unpalatable, there is widespread agreement that the

[1] The German/Scandinavian proverb "Malicious joy is the only true joy", or versions thereof, reflects similar sentiments.

norms in these examples are harmful, stifles initiative and entrepreneurship.[2] For instance, an op-ed piece in International Herald Tribune notes that "None other than prime minister John Howard has argued, "If there's one thing we need to get rid of in this country it is our tall poppy syndrome."" (Bowring [2]). Similar sentiments have been echoed in Swedish political debate.

At least since Weber [23], social scientists have been interested in social norms that promote achievement. Comparatively little attention has been paid to norms that *discourage* achievement. In this paper we construct a theory of such *norms of mediocrity.* The idea is that a norm against exerting too much effort may be efficiency-enhancing in a setting where effort is mainly redistributive. We have in mind a contest model along the lines of those of rent-seeking theory (e.g., Tullock [21]). On the other hand, to the extent that effort is also productive, and depends on individual ability, a trade-off emerges. We study a model where the optimal maximum effort established by the norm will depend on both the relative degree with which efforts are redistributive rather than productive and the distribution of talent in society.

Much of the evidence on the Tall Poppy Syndrome, the Law of Jante, and other norms dampening achievement motivation, is anecdotal. However, cross cultural research on achievement motivation clearly indicates that the these values are particularly strong in the U.S. When it comes to taking pleasure in the downfall of tall poppies picture not as clear cut. (See e.g. Feather [7] for a comparison between Australian, Amercian and Canadian Students and Nelson and Shavitt [17] for a comparison between the U.S. and Denmark). The attitudes to high achievers are also influenced factors, such as the strength of egalitarian values in society. Individuals holding such

[2] See e.g. Kirkwood [15] for a discussion of how the Tall Poppy Syndrome affects entreprenurship in New Zeeland.

values may be less inclined to associate status with achievement, and may very much resent persons perceived as aspiring to high social status by virtue of their achievement. At the same time achievement itself may be viewed as commendable, as long as it is accompanied with modesty.[3] Egalitarian values are strong in Australia, New Zealand and Scandinavia.[4]

Quantitative evidence on how widely such norms are held seem to be even scarcer. However, Tornstam [20] examines values relating to individualism vs solidarity in Sweden, at two points in time, by asking which of a pair of values the respondents' felt were most important in their lives. The survey question designed to capture the Jante Law entailed a choice between "Realizing that you are not superior to others" or "Believing in your own capacity." In the 1982 survey a resounding 60 percent came out in favor of the Jante alternative while 40 percent preferred to trust in their own capacity. Since then the support for Jante values seems to have eroded significantly, and by 2005 these numbers were reversed. Tornstam notes that: "In 1982, no less than 61 percent of the women supported the Jante Law, which in 2005 has dropped to 29 percent. The percentage of male supporters has also dropped, but not as drastically. This has created a 2005 gender difference that did not exist in 1982. In 2005, more men (38%) than women (29%) support the Jante Law."

There is a vast literature on the perils of social competition which traces its roots to Veblen [22] and have been substantially developed in books by

[3]Disentangling achievement and social status is key to limiting social competition and the tall poppy syndrome or the law of Jante could be interpreted as sanctioning violations of this understanding, rather than achievement itself.

[4]The oft cited Japanese proverb "Deru kugi wa utareru" (The nail that sticks up gets pounded down) suggests similar norms are also present and important in the Japanese society. Japanese students actually seem to relish the downfall of tall poppies more than Australian students. (See Feather and McKee [16]) However, it has been argued that in this case the norm is not connected to achievement in particular but to standing out from the crowd in any respect and reflects a profound difference between collectivist and individualistic societies, rather than differences in achievement attitudes.

Duesenberry [4], Hirsh [12] and, more recently, Frank [8, 9, 10]. In addition, a wide range of aspects of social competition have been addressed in economics literature including the reasons for social comparisons, their relationship to income inequality, how they influence educational choice, affect consumption and savings behavior and ultimately growth

In dealing with the negative effects of social competition the literature has discussed different types of tax schemes, including income taxes and taxation of status goods as well as norms. (See e.g. Boskin and Sheshinski [19] Ireland [13] and Frank [11]). Perhaps closest related to our paper is the study by Cole, Mailath and Postlewaite [18] of class systems as self enforcing social norms that may serve to reduce social competition.

The paper proceeds as follows. In section 2 we present a simple model of individual effort choice and its social consequences when effort can be both productive and redistributive. In section 3 we introduce mediocrity norms and examine their effect on behavior and individual utility. Section 4 (In progress, omitted in this version) discusses norm formation and section 5 (To be written) offers some concluding remarks.

2 The Model

We examine individual effort choice in a simple model of a society with social competition externalities. The population in the society is assumed to have a continuum of agents and its size is normalized to 1.

In our model a society is characterized by the extent to which individual effort x is productive and generates new wealth and to what extent it merely redistributes resources among agents. This is measured by a parameter $\alpha \in [0, 1]$, where $\alpha = 0$ means that effort is only productive and there is no redistribution while $\alpha = 1$ means that individuals can only improve their lot at the expense of others. We also allow for the possibility that individual effort may have positive external effects on other agents' wellbeing, which is reflected by the parameter β.

Effort is assumed to be costly for the individual, and how costly it is depends on the individual's productivity. Individuals are assumed to have identical preferences over the benefits derived from effort but to differ in productivity. Specifically, the differences in productivity are reflected in their cost of effort, which is assumed to differ by a scale factor $1/\lambda$ where λ is distributed according to a density function $f(\lambda)$ defined on $[\underline{\lambda}, \bar{\lambda}]$ and where $\underline{\lambda} \geq 0$. For convenience, we also assume that the productivity distribution is normalized so that the mean productivity equals 1, i.e., $\int_{\lambda \in [\underline{\lambda}, \bar{\lambda}]} \lambda f(\lambda) d\lambda = 1$.

Specifically, we assume that the utility of an individual with productivity λ depends on her effort, x in the following simple way,

$$U(x; \lambda) = \alpha \frac{x}{\bar{x}} + (1 - \alpha)(1 + x) + \beta \bar{x} - \frac{1}{\lambda} \frac{x^2}{2} \tag{1}$$

where $\bar{x}$ is the expected average effort level in the population. The first term reflects the social competition, which is modeled as a contest for a fixed resource where the individual's effort relative to the average effort level, $\bar{x}$, determines her expected share of the resource.[5] The second term captures two things, the fraction of the fixed resource that is not subject to competition, but shared equally, and the utility of effort that is not derived at the expense of other agents, $(1 - \alpha)x$.[6] The third term represents the poten-

[5]We can think of this as the size of the resource being proportional to the size of the population, say N, so that $\alpha N(x_i / \sum x_j) = \alpha \mathrm{N}(x_i / N\bar{x})$, where the Ns cancel out.

[6]With this formulation an increase in α affects welfare both through increased social competition and decreased return on individual effort. The effects could be disentangled with a separate parameter for x, and shown to both be negative. However, here we are concerned with variations in social norms for a given α and the chosen specification is analytically more convenient.

tial positive externality effort might have. Finally, the last term reflects the agent's utility cost of effort.

2.1 Effort choice and social welfare

When choosing effort we assume that individuals disregard the effects of their own effort choices on the average effort level in the population. The first order condition for an individual's choice of effort is thus:

$$\frac{\partial U(x;\lambda)}{\partial x} = \frac{\alpha}{\bar{x}} + (1-\alpha) - \frac{x}{\lambda} = 0, \tag{2}$$

and the optimal effort choice, for a given $\bar{x}$, is then given by

$$x^*(\lambda) = \lambda\left(\frac{\alpha}{\bar{x}} + 1 - \alpha\right). \tag{3}$$

Hence, individual effort turns out to be proportional to the agent's productivity, and to decrease in average effort.

Next we solve for average effort and the optimal individual effort in equilibrium. The average level of effort is simply, $\bar{x} = \int_{\lambda\in[\underline{\lambda},\bar{\lambda}]} x^*(\lambda)f(\lambda)d\lambda = \alpha/\bar{x} + 1 - \alpha$ and solving this quadratic fixed-point expression for $\bar{x}$ yields $\bar{x} = 1$. It follows from expression (2) that $x^*(\lambda) = \lambda$. Consequently, in equilibrium, the optimal individual effort is independent of the extent to which effort is productive or redistributive, and simply equals the individual's productivity.

The utility of an individual with productivity λ is then

$$U(x^*(\lambda)) = \frac{\lambda}{2} + 1 - \alpha + \beta. \tag{4}$$

Throughout the paper we will measure social welfare, W, in utilitarian terms, i.e. welfare is given by,

$$W = \int_{\underline{\lambda}}^{\bar{\lambda}} U(\lambda) f(\lambda) d\lambda. \quad (5)$$

Hence, the level of social welfare in the equilibrium here is

$$W^* = \frac{1}{2} + 1 - \alpha + \beta. \quad (6)$$

Since individual consumption to a certain extent comes at the expense of others, for $\alpha > 0$, we can expect that individuals will exert too much effort in equilibrium and suffer a lower individual as well as collective welfare as a consequence, unless, of course, the positive externalities of effort outweigh these effects.

2.2 Socially optimal effort

Below, we briefly examine the benchmark case where individual effort is chosen so as to maximize social welfare, which is given by,

$$W = 1 + \int_{\underline{\lambda}}^{\bar{\lambda}} \left((1-\alpha)x + \int_{\underline{\lambda}}^{\bar{\lambda}} \beta x f(\lambda) d\lambda - \frac{1}{\lambda}\frac{x^2}{2} \right) f(\lambda) d\lambda. \quad (7)$$

where the first term simply reflects the total size of the fixed resource, which obviously is independent of individual effort. Maximizing social welfare amounts to maximizing each individuals contribution to social welfare, i.e. the bracketed part of the second term. This gives us the following first order condition, $1 - \alpha + x/\lambda + \beta = 0$. Hence, the socially optimal individual effort choice is simply,

$$x^{SW}(\lambda) = (1 - \alpha + \beta)\lambda \quad (8)$$

and consequently the corresponding average effort level is $\bar{x} = 1 - \alpha + \beta$.

Insertion of these effort levels into the individual's utility function yields

$$U^{SW}(\lambda) = 1 - \alpha + \lambda\alpha + ((1-\alpha)\lambda + \beta)(1 - \alpha + \beta)) - \frac{(1-\alpha+\beta)^2}{2} \quad (9)$$

and thus utilitarian social welfare is simply,

$$W^{SW} = 1 + \frac{(1-\alpha+\beta)^2}{2}. \quad (10)$$

We can compare the socially optimal situation with the equilibrium one from a welfare point of view by examining the difference in social welfare between the cases, $\Delta W = W^{SW} - W^*$,

$$\Delta W = \frac{1}{2}(\alpha - \beta)^2 \geq 0. \quad (11)$$

This simply tells us that whenever there are externalities, and these do not exactly balance out, inefficiencies arise. In particular, these inefficiencies grow quadratically with the net externality, e.g. with the extent to which the economy has a redistributive rather than productive character. As would be expected, in such a case, individual as well as social welfare would increase if agents could be convinced to expend somewhat less effort than in equilibrium.

3 Social norms of mediocrity

"Nothing is good but mediocrity. The majority has settled that and finds fault with him who escapes it at whichever end." *Blaise Pascal, Pensees section VI, 378*

The discussion in the preceding section suggests that in societies where social competition is pervasive social welfare could potentially be improved by social norms dissuading effort. However, it is clear that such norms could also create new inefficiencies, especially if they fail to take into account differences in individual productivity. Norms imposing uniform standards across a population with diverse abilities will almost certainly lead to efficiency losses. Under such conditions some agents may well find it optimal to deviate from the norm, unless the sanctions are too harsh. If sanctions are imposed in equilibrium they also entail real welfare losses.

3.1 Equilibrium Norm Adherence

Here we will consider norms that consist of two components, a prescribed behavior and sanctions, should the norm be transgressed. Individual differences could, in principle, be taken into account in either of these. However, we argue that to the extent norms take differences in individual types into account it is more plausible that they do so in terms of the harshness of the sanctions rather than via individualized standards of behavior.

Specifically, we assume that a mediocrity norm consists of two elements, a threshold effort level $\hat{x} < 1$ and a sanction s should that threshold be exceeded. Furthermore, we assume that severity of the sanction as perceived by the sanctioned individual decreases in that persons productivity. One reason for this is that talent, or luck, seems to be a mitigating circumstance for high achievement in societies with mediocrity norms. One interpretation might be that being talented is not the individual's fault while excessive ambition is a matter of choice.[7] Another reason is that societies tend to be socially stratified, so that very successful individuals often socialize with their likes. Hence, the more productive an individual is, the less likely he or

[7] Successful athletes and lottery winners seem less subject to mediocrity norms than, say, successful entrepreneurs - a state of affairs occasionally lamented by industry leaders. Indeed, if mediocrity norms serve to dampen effort, it is only natural that success mainly stemming from luck or talent would be exempt from sanctions. Also, in sports or artistic expressions, the participants' effort often directly benefits third parties, such as viewers or listeners - a positive externality that may vastly outweigh the social competition problem.

she is to encounter the rebuke of those adhering to the mediocrity norm.[8]

To capture this tendency we assume that the harshness of a sanction, s, that is felt by an individual is inversely proportional to the that individual's productivity, i.e. s/λ. Now, the individual's utility when facing a mediocrity norm is given by,

$$U(x;\lambda) = \begin{cases} \alpha\frac{x}{\bar{x}} + (1-\alpha)(1+x) + \beta\bar{x} - \frac{1}{\lambda}\frac{x^2}{2} & \text{if } x \leq \hat{x} \\ \alpha\frac{x}{\bar{x}} + (1-\alpha)(1+x) + \beta\bar{x} - \frac{1}{\lambda}\frac{x^2}{2} - \frac{s}{\lambda} & \text{if } x > \hat{x} \end{cases} \tag{12}$$

Utility maximizing agents comply with the norms if it is in their best interest to do so, either because their optimal unconstrained choice of effort falls below the norm threshold, $\hat{x}$, or because the sanctions they are facing if they break the norm exceeds the gain from deviating. However, agents that have a very high productivity may find it optimal to choose effort without regard to the norm, provided the sanctions are not too strong. Hence, there may exist two productivity thresholds that determine the range of individual productivity for which a mediocrity norm imposes a binding constraint. To derive these thresholds we examine the individual's utility given by expression (12) for each of these three cases outlined above.

The low productivity threshold, λ_L, is simply given by the productivity for which the threshold effort level, $\hat{x}$, is the optimal choice in accordance with expression (2), i.e. $\lambda_L = \hat{x}/(\frac{\alpha}{\bar{x}} + 1 - \alpha)$. The high productivity threshold, λ_H, is defined by the productivity that makes an agent just indifferent between complying with the norm and breaking it, i.e. if $U(x^*(\lambda);\lambda) = U(\hat{x};\lambda)$. By inserting $\hat{x}$ and expression (3) into expression (12) above, we can see that

[8] Suppose agents live in a linear city, ordered according to productivity, λ. If they are equally likely to stroll in either direction and visit one λ address on their walk, then a λ_H agent who breaks the norm has a 50 percent risk of being sanctioned, while a $2\lambda_H$ agent only runs a 25 percent risk (the risk being inversely proportional (1/(2n)) to the distance from λ_H).

this is the case for a λ such that,

$$\left(\frac{\alpha}{\bar{x}}+1-\alpha\right)^2\frac{\lambda}{2}-\frac{s}{\lambda}=\left(\frac{\alpha}{\bar{x}}+1-\alpha\right)\hat{x}-\frac{1}{\lambda}\frac{\hat{x}^2}{2}. \tag{13}$$

Solving this equality for λ gives us one root exceeding the lower threshold, λ_L, namely $\lambda_H = (\hat{x}+\sqrt{2s})/(\frac{\alpha}{\bar{x}}+1-\alpha)$. Of course, this threshold only binds if $\lambda_H < \bar{\lambda}$. For notational convenience let us define $\bar{\lambda}_H = min\{\lambda_H, \bar{\lambda}\}$. Moreover, note that $\lambda_L \leq \lambda_H$, with equality for $s = 0$, and that both thresholds are strictly increasing in $\bar{x}$.

To summarize, when there is a mediocrity norm the optimal effort choice for an agent, given an expected average effort level $\bar{x}$, is

$$x^n(\lambda) = \begin{cases} \lambda\left(\frac{\alpha}{\bar{x}}+1-\alpha\right) & \text{if } \lambda \leq \lambda_L \text{ or } \lambda_H < \lambda \\ \\ \hat{x} & \text{if } \lambda_L < \lambda \leq \bar{\lambda}_H \end{cases} \tag{14}$$

Note that if $\lambda_H < \lambda$ then, obviously, $\lambda_H < \bar{\lambda}$.

However, to fully pin down the agents' effort choices we need to examine the equilibrium average effort level in the population, $\bar{x}$, in the presence of the mediocrity norm. The average effort, $\bar{x} = \int_{\underline{\lambda}}^{\bar{\lambda}} x^n f(\lambda)d\lambda$, can be expanded and expressed as follows,

$$\begin{aligned}\bar{x} &= \int_{\underline{\lambda}}^{\bar{\lambda}}\left(\tfrac{\alpha}{\bar{x}}+1-\alpha\right)\lambda f(\lambda)d\lambda - \int_{\lambda_L}^{\bar{\lambda}_H}\left(\tfrac{\alpha}{\bar{x}}+1-\alpha\right)\lambda f(\lambda)d\lambda + \int_{\lambda_L}^{\bar{\lambda}_H}\hat{x}f(\lambda)d\lambda \\ &= \left(\tfrac{\alpha}{\bar{x}}+1-\alpha\right)\left(1-\int_{\lambda_L}^{\bar{\lambda}_H}(\lambda-\lambda_L)f(\lambda)d\lambda\right),\end{aligned} \tag{15}$$

which is a fixed-point equation in $\bar{x}$. For convenience, we define the function H as follows,

$$H(\bar{x}) \equiv \bar{x} - \left(\frac{\alpha}{\bar{x}}+1-\alpha\right)\left(1-\int_{\lambda_L}^{\bar{\lambda}_H}(\lambda-\lambda_L)f(\lambda)d\lambda\right). \tag{16}$$

Using H it is straightforward to show existence and uniqueness of a fixed-point in $\bar{x}$.

PROPOSITION 1.There exists a unique $\bar{x} \leq 1$ satisfying condition (A.2).

Proof of PROPOSITION 1. H is continuous in $\bar{x}$ and $\lim_{\bar{x}\to 0} H(\bar{x}) = -\infty$ while

$$H(1) = 1 - \left(1 - \int_{\lambda_L}^{\bar{\lambda}_H} (\lambda - \hat{x}) f(\lambda) d\lambda\right) \geq 0,$$

which ensures existence. Since H is continuous in $\bar{x}$, a sufficient condition for uniqueness is that H is strictly increasing. Now, using Liebnitz's rule we have that

$$\tfrac{\delta H(\bar{x})}{\delta \bar{x}} = 1 + \tfrac{\alpha}{\bar{x}^2}\left(1 - \int_{\lambda_L}^{\bar{\lambda}_H} (\lambda - \lambda_L) f(\lambda) d\lambda\right) +$$
$$\left(\tfrac{\alpha}{\bar{x}} + 1 - \alpha\right)\left[\int_{\lambda_L}^{\bar{\lambda}_H} \tfrac{\partial(\lambda - \lambda_L)}{\partial \bar{x}} f(\lambda) d\lambda + (\lambda_H - \lambda_L) f(\lambda_H) \tfrac{\partial \lambda_H}{\partial \bar{x}} - (\lambda_L - \lambda_L) f(\lambda_L) \tfrac{\partial \lambda_L}{\partial \bar{x}}\right]$$

which may be simplified to,

$$1 + \tfrac{\alpha}{\bar{x}^2}\left[1 - \int_{\lambda_L}^{\bar{\lambda}_H} \lambda f(\lambda) d\lambda + \lambda_H f(\lambda_H) \tfrac{\sqrt{2s}}{\frac{\alpha}{\bar{x}} + 1 - \alpha}\right] > 1. \square$$

Next, we turn to the comparative statics properties of this equilibrium. Specifically, we examine how the extent to which effort is redistributive, rather than productive, impacts on the equilibrium effort and how the equilibrium is influenced by the strength of a mediocrity norm.

As would perhaps be expected, the average effort level is higher in societies where the redistributive effect of effort is relatively more important. Moreover, stronger mediocrity norms tend to reduce average effort. Formally,

PROPOSITION 2. The equilibrium average effort, $\bar{x}$, is strictly increasing in α, independent of β and strictly decreasing in s. A sufficient condition for $\bar{x}$ to be increasing in $\hat{x}$ is that f is non-increasing on $[\lambda_L, \bar{\lambda}_H]$.

Proof of PROPOSITION 2. See the appendix.

Not surprisingly, we have found that mediocrity norms can dampen the average effort level. Hence, such norm could, at least potentially, improve economic welfare. However, before moving on to discuss the effects of mediocrity norms on welfare we may note that mediocrity norms, while decreasing the average effort level, affect individual effort choices in a rather asymmetric way. In fact, agents that are not affected by the norm or choose not to abide by it will actually increase their effort in equilibrium, in response to the lower average effort level.

PROPOSITION 3 For a given $\hat{x}$, an increase in s (1) strictly reduces λ_L and strictly increases λ_H and (2) lead agents with $\lambda < \lambda_L$ and $\lambda > \lambda_H$ to strictly increase their effort.

Proof of PROPOSITION 3. See the appendix.

Of course, the reason that $\bar{x}$ decreases in s is that an increase in s *directly* increases the threshold λ_H. The resulting decline in $\bar{x}$ then precipitates increased effort among agents not conforming to the norm, as well as slight decreases in both productivity thresholds.

3.2 Mediocrity Norms and Individual Utility

In the presence of social competition, and absent significant positive externalities of effort, it is easy to demonstrate that mediocrity norm can indeed improve welfare, as will be seen below. However, there are also obvious welfare reducing effect associated with mediocrity norms. First, the imposition of sanctions directly reduces social welfare, and second, since the norm prescribes a uniform effort level regardless of the agent's productivity, individual effort levels will not be optimal under a mediocrity norm and can be worse than in the absence of a norm for some segments of the population. The latter effect is obviously less of a problem if agents do not differ very much in terms of productivity.

As an illustration, let us consider two examples. First we assume that all agents all are equally productive and then we look at a case where one group of agents have a low productivity whereas the other group has a high productivity.

EXAMPLE 1. Suppose all agents are equally productive, i.e. $f(1) = 1$, and that $\beta = 0$. The equilibrium effort is then $x^* = 1$ while the efficient level is $x^{SW} = 1 - \alpha$. Since x^{SW} is the same for all agents it is clearly efficient to set $\hat{x} = 1 - \alpha$. Insertion of $\hat{x} = \bar{x} = 1 - \alpha$ into λ_H implies $s \geq \frac{1}{2}\left(\frac{\alpha}{1-\alpha}\right)^2$. This results in full efficiency.

While efficiency is fully restored by the mediocrity norm in the above example, the reduction in average effort generally comes at a cost, e.g. in terms of a stigma induced utility loss among high performers or a socially non-optimal choice of effort for agents adhering to the norm.

EXAMPLE 2. Suppose there are two types of agents, L-types and H-types, whose respective productivities are l_L and l_H, where $l_L \leq 1 \leq l_H$. Their population shares are f_L and f_H, where $f_L + f_H = 1$ and $f_L l_L + f_H l_H = 1$. In the absence of norms agents will choose efforts equal to their productivity and social welfare is given by expression (6). When introducing norms, there are several cases to consider, but for simplicity, we focus on a norm that binds for both groups, so that $\hat{x} = \bar{x}$. Social welfare is then $1 + (1 - \alpha + \beta)\hat{x} - (f_L/l_L + f_H/l_H)\hat{x}^2/2$ and the optimal $\hat{x}$ is $(1 - \alpha + \beta)/(f_L/l_L + f_H/l_H)$. Hence, the equilibrium social welfare is $1 + 1/2(1 - \alpha + \beta)^2/(f_L/l_L + f_H/l_H) \leq W^{SW}$. Equality holds if $l_L = l_H$, which is the case considered in Example 1. If groups differ in productivity efficiency falls, e.g., if $l_L = 1/2$ and $l_H = 2$ then $f_L/l_L + f_H/l_H = 1.5$. The greater the productivity difference the greater the numerator.[9]

[9]Since we have normalized the productivity distribution so that $f_L l_L + f_H l_H = 1$ it

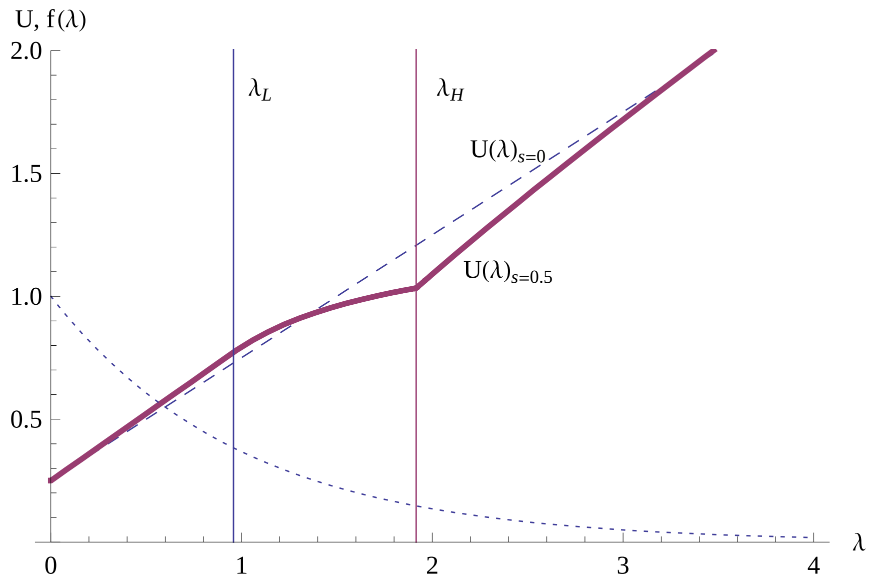

Figure 1: Utility as a function of productivity under a mediocrity norm. The dashed line shows utility in the absence of a norm. Productivity is exponentially distributed, $f(\lambda) = e^{-\lambda}$ (the dotted curve), $s = 0.5$, $\alpha = 0.75$, $\beta = 0$ and $\hat{x} = 1$.

More generally, the effect of a productivity norm on an individual's welfare depends on her productivity. All agents benefit from a reduction in social competition. Low productivity agents may not be constrained by the norm at all and enjoy only the benefits of a lower average effort level. Agents with higher productivity may either incur costs of adjusting to the norm or costs related to breaking the norm.

The example in *Figure 1* illustrates the effects of a mediocrity norm. The presence of the norm lowers the average effort and benefits low productivity agents, with λ below λ_L, which is reflected in their utility (the bold curve) being above the dashed line, representing the utility in the absence of a norm. Between the thresholds, agents adhere to the norm. For the agents at the

follows that the numerator equals $(l_H + l_L - 1)/(l_H l_L)$.

lower end of this productivity interval the beneficial effect of a lower average effort level dominates but for the agents in the upper part of this interval, the constraint imposed on their own effort by the norm outweighs the benefit of the lower overall effort level. Agents whose productivity exceeds λ_H find it worthwhile to disregard the norm, despite the sanction s, but may well find themselves worse off than in the absence of a norm, unless their productivity is sufficiently far above the threshold level. Recall that the effect of the stigma was assumed to decline with productivity, e.g. reflecting a social segregation.

In fact, the pattern in this example and *Figure 1* above, where utility increases in productivity and displays a cusp at λ_H, turns out to hold more generally.

PROPOSITION 4. For norms such that $\hat{x} > 0$ and $s > 0$, U is strictly increasing in λ and continuously differentiable on R^+, except at λ_H where $D_-U(\lambda_H) < D_+U(\lambda_H)$. For $\lambda < \lambda_L$ and $\lambda_H < \lambda$ the slope is strictly steeper than if $s = 0$, and for λ approaching λ_H from below it is strictly less steep.

Proof of PROPOSITION 4. See the appendix.

Note that in the absence of positive externalities relating to effort, i.e. $\beta = 0$, the utility of agents with zero productivity is unaffected by mediocrity norms, since their optimal effort is zero. However, if $\beta > 0$ the utility in the $s = 0$ case shifts up by $\beta(1 - \bar{x})$ in relation to the mediocrity norm case. Bearing this in mind we can state the following straightforward implications without proof:

COROLLARY. Consider a $s > 0$. If $\beta = 0$, either all agents with $\lambda > 0$ are strictly better off than if $s = 0$, or there is a closed interval around λ_H where agents are worse off. For $\beta > 0$ agents with sufficiently low λ are strictly worse off than if $s = 0$.

Basically everyone benefits from reduced social competition, except those with very low productivity for whom even small positive externalities of others' effort may outweigh the fruits of their own labor. However, as noted in *Proposition 3*, the entire reduction in average effort is accomplished by those who adhere to the norm. The others free ride and even increase their efforts. Adhering to the norm, of course, is more of burdensome for those with high productivity, and the mediocrity norm is most likely to be detrimental for those who are close to indifferent, whether they follow the norm or break it.

Naturally, if positive externalities become sufficiently prominent almost all agents are better of without mediocrity norms. However, for agents with sufficiently high λ the increased return on their own effort such norm bring is worth more than the positive externalities.

4 Norm Formation

In progress.

5 Concluding Remarks

To be written.

References

[1] David Austen-Smith and Roland G Fryer, Jr. An economic analysis of "acting white". *Quarterly Journal of Economics*, 120:551–583, 2005.

[2] Philip Bowring. Tall poppies flourish down under. *International Herald Tribune*, February 26 2007.

[3] Jennifer DeLora. May the best—or the deafest—win? *Deaf Life*, 8(10):27–29, 1996.

[4] J S Duesenberry. *Income, Savings, and the Theory of Consumer Behaviour.* Harvard University Press, Cambridge, 1949.

[5] N T Feather. Authoritarianism and attitudes toward high achievers. *Journal of Personality and Social Psychology*, 65:152–164, 1993.

[6] N T Feather. Attitudes toward high achievers and reactions to their fall: Theory and research concerning tall poppies. *Advances in Experimental Social Psychology*, 26:1–73, 1994.

[7] N T Feather. Attitudes toward high achievers, self-esteem, and value priorities for australian, american, and canadian students. *Journal of Cross-Cultural Psychology*, 29:749–759, 1998.

[8] Robert H Frank. *Choosing the Right Pond: Human Behavior and the Quest for Status.* Oxford University Press, New York, 1985.

[9] Robert H Frank. *Luxury Fever: Money and Happiness in an Era of Excess.* The Free Press, New York, 1999.

[10] Robert H Frank. *Falling Behind: How Income Inequality Harms the Middle Class.* University of California Press, Berkeley, 2007.

[11] Robert H Frank. Should public policy respond to positional externalities. *Journal of Public Economics*, 92(8–9):1777Ũ–1786, 2008.

[12] Fred Hirsh. *Social Limits to Growth.* Harvard University Press, Boston, 1976.

[13] Norman Ireland. Status seeking, income taxation, and efficiency. *Journal of Public Economics*, 70:99Ũ–113, 1998.

[14] Christina Johansson Robinowitz and Lisa Werner Carr. *Modern-Day Vikings.* Intercultural Press, Portland, ME, 2001.

[15] Jodyanne Kirkwood. Tall poppy syndrome: Implications for entrepreneurship in new zealand. *Journal of Management & Organization*, 13(4):366–382, 2007.

[16] N T Feather I R McKee. Global self-esteem and attitudes toward the high achiever for australian and japanese students. *Social Psychology Quarterly*, 56(1):65–76, 1993.

[17] Michelle R Nelson and Sharon Shavitt. Horizontal and vertical individualism and achievement values. a multimethod examination of denmark and the united states. *Journal of Cross-Cultural Psychology*, 33(5):439–452, 2002.

[18] Harold L Cole George J Mailath Andrew Postlewaite. Class systems and the enforcement of social norms. *Journal of Public Economics*, 70(1):5–35, 1998.

[19] Michael Boskin Eytan Sheshinski. Status effects and negative utility growth. *Economic Journal*, 92(4):589Ũ–601, 1978.

[20] Lars Tornstam. From global solidarity to individualism. a 23 year comparative perspective on certain changes in swedish value preferences. Technical report, Online report from The Social Gerontology Group, Uppsala University, 2008.

[21] Gordon Tullock. Efficient rent seeking. In James M Buchanan, Robert D Tollison, and Gordon Tullock, editors, *Toward a Theory of the Rent-Seeking Society*, pages 269–282. Texas A&M University Press, College Station, Texas, 1980.

[22] Thorstein Veblen. *The Theory of the Leisure Class*. MacMillan, New York, 1899.

[23] Max Weber. *The Protestant Ethic and the Spirit of Capitalism*. Allen and Unwin, London, 1930. Trans Talcott Parsons.

[24] John H Bishop Matthew Bishop Lara Gelbwasser Shanna Green Andrew Zuckerman. Nerds and freaks: A theory of student culture and norms. *Brookings Papers on Education Policy*, pages 141–199, 2003.

6 Appendix

Proof of PROPOSITION 2. The comparative statics results are derived by implicit differentiation of H, where $dH/d\bar{x} > 0$ and

$$\begin{aligned} &\tfrac{dH}{d\alpha} = -\left(\tfrac{1}{\bar{x}} - 1\right)\Big[1 - \textstyle\int_{\lambda_L}^{\bar{\lambda}_H}(\lambda - \lambda_L)f(\lambda)d\lambda + (\lambda_H - \lambda_L)f(\lambda)\bar{\lambda}_H\Big] < 0, \\ &\tfrac{dH}{d\beta} = 0, \tfrac{dH}{ds} = \tfrac{f(\lambda_H)}{\frac{\alpha}{\bar{x}}+1-\alpha} > 0 \text{ and } \tfrac{dH}{d\hat{x}} = -\textstyle\int_{\lambda_L}^{\bar{\lambda}_H} f(\lambda)d\lambda + \tfrac{\sqrt{2s}}{\frac{\alpha}{\bar{x}}+1-\alpha} f(\bar{\lambda}_H). \end{aligned} \qquad (A.1)$$

Since $\sqrt{2s}/(\alpha/\bar{x}+1-\alpha)$ is simply the distance between λ_L and $\bar{\lambda}_H$ the last expression is negative if f is non-increasing over this interval. If $\lambda_H > \bar{\lambda}$ then, of course, $f(\bar{\lambda}_H) = 0$. □

Proof of PROPOSITION 3. An increase in s has a direct positive effect on λ_H and a negative indirect effect, via the fall of $\bar{x}$. However, as implied by expression (3) a decrease in $\bar{x}$ causes all those not abiding the norm to increase their effort. Consequently, $\bar{x}$ can only decrease if either those adhering to the norm reduce their effort (which they don't - it is fixed at $\hat{x}$) or if agents previously exerting a higher effort decides to join the ranks of the norm followers, that is λ_H increases. Hence, if $\bar{x}$ decreases then λ_H must increase. The negative effect on λ_L follows directly from its definition. □

Proof of PROPOSITION 4. Continuity in λ follows trivially since the utility levels for disregarding and following the norm at the thresholds λ_L and λ_H are equal by definition. The derivatives for the three λ regions, below, between and above the thresholds respectively are:

$$\begin{array}{ll} \frac{dU}{d\lambda} = \frac{1}{2}\left(\frac{\alpha}{\bar{x}}+1-\alpha\right) & \lambda < \lambda_L \\ \frac{dU}{d\lambda} = \frac{1}{2}\left(\frac{\hat{x}}{\lambda}\right)^2 & \lambda_L < \lambda < \lambda_H \\ \frac{dU}{d\lambda} = \frac{1}{2}\left(\frac{\alpha}{\bar{x}}+1-\alpha\right) + \frac{s}{\lambda^2} & \lambda_H < \lambda. \end{array} \tag{A.2}$$

Note that the first and the second derivative are equal when evaluated at λ_L. Insertion of λ_H into the second and the third derivative confirms that the last segment is strictly steeper for $s > 0$. For $s = 0$ the derivatives all equal $1/2$, and that the thresholds coincide at $\hat{x}$. □