

# **Social Capital and Conflict**

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## Abstract

The purpose of this paper is to question the assumption that hostile group interaction is necessarily bad for welfare. The focus of the approach adopted here is that the existence of hostile group relations may bolster group identity, which may affect the source of capital returns to the group in that group identity becomes a form of capital. Group identity as a form of capital may be less expropriable and may also have an effect on fighting effectiveness. Depending on how these effects interact it will be shown that a group may be better off investing in group identity (as a form of social capital) rather than physical capital, even if the latter yields a higher return. In addition, it is argued that since group identity only makes sense if another potentially hostile group exists then the potential for group conflict may leave the group better off than under autarky. This would require the capital return on group identity to be greater than the return on physical capital and this insight runs contrary to the standard approach taken in the economics of conflict literature where autarky would be superior to group interaction (if trade is ignored) as there would be no investment in arms.

## **1. Introduction**

It is a cornerstone of the literature on the economics of conflict that conflict is costly. This insight seems, at first sight, obvious if violent conflict happens but it less obvious if conflict does not take place. The reasoning is that groups divert resources from productive into unproductive activities (namely the provision of arms) as a credible deterrent and the resources used for arms are a loss to the overall collective. The social dilemma, of course, is that it is not possible to form a credible agreement that would eradicate military spending. Further, if there is incomplete information and/or a failure of credible commitment which actually lead to conflict, the costs are increased through the destruction of resources and the potential *ex post* negative effect on future investment.

The purpose of this paper is to question the assumption that hostile group interaction is necessarily bad for welfare. It is acknowledged that this is not the first paper to ask this question (the related literature will be discussed in the next section), but the approach taken here is markedly different. The focus of the approach adopted here is that the existence of hostile group relations may bolster group identity, which may affect the source of capital returns to the group in that group identity becomes a form of capital. Group identity as a form of capital may be less expropriable and may also have an effect on fighting effectiveness.

Depending on how these effects interact it will be shown that a group may be better off investing in group identity (as a form of social capital) rather than physical capital, even if the latter yields a higher return. In addition, it is argued that since group identity only makes sense if another potentially hostile group exists then the potential for group conflict may leave the group better off than under autarky. This would require the capital return on group identity to be greater than the return on physical capital and this insight runs contrary to the standard approach taken in the economics of conflict literature where autarky would be superior to group interaction (if trade is ignored) as there would be no investment in arms. In the next section, related literature will be surveyed, in Section 3 a very simple model will be presented that illustrates the key ideas. Section 4 will offer some discussion and concluding comments.

## **2. Related Literature**

The economics of conflict literature is now very well established and Garfinkel and Skaperdas (2007) provide an excellent comprehensive review. At the heart of their review lies the contest success function. This makes clear that even when conflict does not happen, the investment in arms as deterrence is costly as it diverts resources from productive activities. Clearly the cost of conflict increases if conflict actually occurs as it further destroys resources and is likely to have a negative effect on future investment. Collier (1999) categorises these three costs of conflict as diversion, destruction and disruption. Fearon (1995) clarifies that to a large extent conflict should not be expected in the interaction between groups. For conflict to happen there must be at least one of three factors present (if we ignore irrationality), (1) incomplete information, (2) commitment failure, (3) indivisibilities. If none of these factors are present we should not expect to see conflict. Nonetheless, conflict costs would remain in terms of arms investment as a credible deterrent and therefore even in a world of no open conflict hostile groups (if we ignore trade) have a negative effect on welfare.

Much of the economics of conflict literature was developed with the idea of potential conflict over resources as a prize. An alternative perspective is that conflict is centred upon the security of property rights. With this perspective Grossman and Kim (1995 and 1996) developed a predator/prey model which contains a modified version of the contest success function, where the prey has the opportunity to move first and invest in arms in order to protect property before the predator makes a decision whether it is profitable to attack the prey given the prey's prior investment in arms. The model to be presented in the next section

will be a simple extension of the Grossman and Kim approach. Clearly the same conclusion holds for this approach as for the standard simultaneously played models of conflict. In equilibrium there will be investment in arms and this represents a welfare loss, even if the prey chooses to invest in arms to such a level that it completely secures its own property from attack by the predator.

Underlying the economics of conflict literature is the assumption of conflictual group relations. The idea of hostile group relations has obviously been a central concern for social psychology. However, the normative status of intergroup relations is viewed ambiguously in this literature. The focus is on the tension between individual, group and collective interests. While it may be the case that individual control of personal goals in order to pursue group goals leads to collective welfare losses (such as war or the anticipation of war and the diversion of productive resources), it may also be the case that the existence of group hostility by focussing attention on in-group interests leads to higher collective welfare as group social dilemmas are resolved without leading to open conflict and provide gains that compensate for the costly diversion of resources towards conflict with the out-group.

The economics of conflict literature generally abstracts from these issues by taking a macro perspective in that it tends to assume a group as a single organic entity. As a result it can abstract from tensions between individual and group interests and focus purely on the social dilemma existing between the group and collective welfare. In this way, it seems clear that a macro level prisoner's dilemma exists such that the optimal level of arms investment would be zero, but the group incentive is to produce arms and seize the reward in response to zero investment by the other group. As a result the prediction is socially inferior, positive arms investment by the groups (even when no conflict actually occurs). However, if we abstract from intra group interaction we potentially ignore a countervailing force. This is the idea that in-group social dilemmas are resolved which provide cooperative welfare gains internally. These internal welfare gains would need to be weighed against the external welfare losses of hostile relations with an out-group before it can be determined whether intergroup relations are good or bad. It may well be the internal gains are large to conclude that hostile group interaction is better for collective welfare than autarky. Indeed, it may only be through the existence of a hostile out-group that in-group cooperation is made possible.

The social psychology of intra and inter group relations is obviously a discipline in itself (see Brown 2000). A key figure in the field is Tajfel (1981) who developed the minimal group paradigm which argues that simple categorisation into arbitrary group can cause group hostility and in-group favouritism. In a number of papers Bornstein and co-

authors (Erev, Bornstein, & Galili (1993), Bornstein, Gneezy, & Nagel (2002), Bornstein (2003) and Halevy, Bornstein & Hagev (2008)) have studied in experiments the trade-off between improved in-group relations as a response to the existence of an out-group.

Charness, Rigotti and Rustichini (2007) and Chen and Li (2009) consider the effect of the minimum group allocation on individual behaviour. The former finds that group salience (and not just group allocation) matters for behaviour and also points out that groups generally induce more aggressive behaviour but that this may be positive or negative for welfare.

Identity (whether that be personal or group) has received considerable attention in Economics in recent years following Akerlof and Kranton (2000). They convincingly argue that certain types of behaviour can only be properly understood within the context of identity. They include identity within the utility function by a) recognising the existence of social categories, b) defining norms associated within these social categories and c) utility will be affected by the extent that an individual conforms or departs from the norms associated with the social categories to which they belong. In this way material goals are traded against those of identity. Sen (2006) considers identity in the context of violence between groups and sees the narrowing of identity as a primary cause of violence. The paper presented here will adopt something of the approach of Akerlof and Kranton by arguing that norms of behaviour associated with group identity can only make sense if an out-group exists, otherwise the social category of in-group could not be brought into existence. The paper contrasts somewhat with Sen in that it could potentially be the case that a narrowing identity is positive for welfare, so long as actual violence does not occur. Identity as a source of capital is explored in Wintrobe (1995) – it provides a dense set of networks for which only membership of the group provides access. This idea links to the idea that social capital in the form of group identity may be less expropriable and this forms an important component of the argument presented here.

There are a number of papers which question the idea that interaction between hostile groups would lead to costs being incurred. Fearon and Laitin (1996) identify conditions for a non-violent equilibrium and peaceful interethnic cooperation. Bloch, Sanchez-Pages and Soubeyran (2006) study alliances and consider conditions under which a grand coalition could emerge and eradicate conflict. Amegashie and Runkel (2008) consider the idea that revenge could create the conditions for stable relationships between groups because even though revenge may be questionable in terms of rationality, if one group anticipates that one group anticipates that the other will take revenge for any aggressive action they may perform this may act as a deterrent. Bevia and Corchon (2010) consider the idea that transfers can be

made from one group to another that would provide peace without commitment. If this mechanism applies an implication is that the transfers would create peace and remove the need for arming. There are other papers that put forward the possibility that actual conflict between groups may be good if this eliminates a bigger negative externality. Sanchez-Pages (2006) argues that if there is a tragedy of the commons that cannot be resolved formally or informally, violence may be efficiency enhancing if it provides exclusive rights to the victor. In a related vein, Munster and Staal (2011) argue that if a group experiences internal conflict, conflict against an external group may be welfare-improving if it creates internal social cohesion and reduces internal fighting to an extent that leaves group members better off.

A key difference in the papers described above and the approach taken in this paper is that in the above analyses welfare would be higher or at least as high if group distinctions disappear and it is assumed that no internal conflict exists. Clearly the cases of transfers and revenge are dependent upon conflicting groups. The existence of conflicting groups only improves welfare relative to an environment where there is only one group when a pre-existing inefficiency is assumed within the group. If this inefficiency did not exist welfare would not be improved by group conflict. In the analysis in this paper it will be assumed that there is no pre-existing inefficiency, but that the potential existence of group conflict may in theory provide for higher levels of welfare than could be secured in the absence of potential group conflict.

There is a literature that suggests actual conflict has arguably been a positive source of welfare without arguing that it reduced fighting internally. Ferguson (2002) put the idea of the 'warfare state' as the foundation of his analysis of the institutions that led to modern economic development. War, he argues, led to the development of efficient centralised bureaucracy. Acemoglu and Robinson (2006) argue that institutional change emerges when elites make concessions to non-elites to prevent costly regime change. Institutional change entails greater commitment than policy concessions. In the case of the UK they argue that the Civil War confirmed the authority of Parliament and this in turn provided greater security of property rights. After World War I the suffrage was greatly extended and this in turn led to the institutions of the modern welfare state. Both of these could be seen as efficiency enhancing but required conflict to allow them to emerge. The approach taken here differs in that there will not be actual conflict. It is not straightforward to make welfare comparisons when it includes a generation which (perhaps briefly) incurs huge costs of conflict. Acemoglu and Robinson, however, also point to institutional changes that come from the credible threat of conflict which because it is credible does not actually materialise. To the extent that

institutional change that emerges from this process is efficiency enhancing then this is similar to the logic operated here.

Clearly the Ferguson and Acemoglu and Robinson approach lie, in contrast to the earlier discussion of group experiments, at the level of high politics. A highly ambitious attempt to place group competition at the national level as an explanation for modern economic success is made by Greenfeld (2001). She argues that nationalism lies behind the success of modern Western style economies. It was the acceptance of individualistic norms but embedded within the norm of nationalistic group identity that provided the driving force. Greenfeld does not focus on potential group conflict, but it would seem logical that nationalism and whatever norms are associated make sense to the extent that there are other nations that form a point of comparison, or more pointedly a source of threat.

In the next section, returns on forms of capital will play a prominent role and given that capital will be depicted as potentially embedded in group identity, the recent work on culture within economics is relevant to the analysis here (see Hillman and Swank (2000) and Tabellini (2008)). So to the extent that a group is aware of the existence of a threatening out-group and that this awareness influences group identity, group norms and the capital returns that come from the adoption of these norms, it could be the case that a culture of group hostility is a crucial factor in determining economic performance and welfare. This effect may be hidden to some extent by the non-observation of conflict; but the non-existence of actual conflict may in itself be driven by the group identity and the potential for destructive conflict that group affiliations may create.

### **3. Illustrative Model**

#### **3.1 The Setting**

To capture the ideas discussed we make simple modifications to the Grossman and Kim (GK) predator/prey model. In the GK set-up they are concerned with the choices of a predator with resources  $\omega = c + k + g$  and prey with resources  $\Omega = C + K + G$ . The prey makes his period 1 choice and the predator then makes his choice taking the prey's choice as given. After the prey makes his choice, in GK an amount  $\alpha K$  is open to predation – the return on capital investment. To draw out the distinction between physical and social capital (group identity) I will change  $\alpha$  to  $\gamma$ , which may be greater than or less than  $\alpha$ . The prey retains fraction  $P$  where

$$P = \begin{cases} 1 - X \\ 0 \end{cases} \quad (1)$$

I now amend the function  $X$  (which was  $X = \theta g / G$  in GK) to capture the idea that group identity may augment the use of defensive weapons, by adjusting  $X$  to become

$X = \theta g / (G + \varepsilon K)$  where  $0 \leq \varepsilon < 1$ . This could be viewed as capturing the findings that come out of the experimental literature that individuals are prepared to sacrifice individual for group interests when faced with the threat of an out-group. This could be reflected in greater effectiveness in fighting and the use of the arms stock. This is treated as a by-product of investing in group identity as a form of capital.<sup>1</sup> GK assume that  $\beta$  of  $\alpha K$  will be destroyed. To capture the idea that capital in the form of group identity may not be completely expropriable we assume that  $s\beta$  of  $\gamma K$  is non-expropriable so that

$$\omega_2 = \alpha k + (1 - \beta)(1 - P)\gamma K \quad (2)$$

$$\Omega_2 = P\gamma K \quad (3)$$

Utility is given by

$$z = u(c_1) + v(\omega_2) \quad (4)$$

$$Z = U(C_1) + V(\Omega_2) \quad (5)$$

We will follow GK and use log-utility.

### 3.2 Resource Allocation: The Potential Predator

I want to focus only on the scenario by which the predator makes no allocation of resources to  $g$ . This provides for clear analytical solutions, but also more substantively allows a focus on the idea of group identity acting as a deterrent for conflict. This will happen if the return to investing in capital for the predator is greater than the return to investing in arms

$$\alpha \geq \frac{(1 - \beta)\theta\gamma K}{G + \varepsilon K} \text{ or}$$

$$G \geq \frac{K((1 - \beta)\theta\gamma - \alpha\varepsilon)}{\alpha} \quad (6)$$

So  $G$  will need to be greater the higher level of  $K$ , the more easily capital can be expropriated, the greater the return on the prey's capital, the lower the prey's fighting effectiveness, the

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<sup>1</sup>This also reflects an insight from Besley (1995) that while the conventional attention is given to stronger property rights stimulating capital investment, it may also be the case that capital investment can sometime promote stronger property rights.

greater the fighting ability of the predator and the lower is the predator's return to capital. We will focus only on the prey, where the prey invests heavily enough in  $G$  so as to deter predation.

### 3.3 Resource Allocation: The Prey

The prey will invest exactly  $G = \frac{K((1-\beta)\theta\gamma - \alpha\varepsilon)}{\alpha}$  in defensive weapons. Noting that

$K = \Omega - C - G$ , we can solve for  $G$  in terms of  $\Omega$  and  $C$  to give

$$G = \frac{(\Omega - C)((1-\beta)\theta\gamma - \alpha\varepsilon)}{(1-\beta)\theta\gamma + \alpha(1-\varepsilon)} \quad (7)$$

Inserting (7) into the utility function gives

$$\log(C) + \log\left(\gamma\left(\Omega - C - \frac{(\Omega - C)((1-\beta)\theta\gamma - \alpha\varepsilon)}{(1-\beta)\theta\gamma + \alpha(1-\varepsilon)}\right)\right) \quad (8)$$

Maximising (8) with respect to  $C$  gives

$$C = \frac{\Omega}{2} \quad (9)$$

From this we can solve for  $K$

$$\Omega = \frac{\Omega}{2} + K + K\left(\frac{(1-\beta)\theta\gamma - \alpha\varepsilon}{\alpha}\right) \quad (10)$$

So that

$$K = \frac{\alpha\Omega}{2((1-\beta)\theta\gamma + \alpha(1-\varepsilon))} \quad (11)$$

### 3.4 Utility Comparisons

In GK,  $\gamma = \alpha$  and  $\varepsilon = 0$ . Furthermore, to capture the significance of expropriability we will set  $\beta = 0$  in the GK set-up, so that investment in physical capital is viewed as completely expropriable whereas investment in group identity is viewed as only partially expropriable because the capital is contained within the networks of the prey group itself.

Therefore prey utility in the GK environment is given by

$$\log\left(\frac{\Omega}{2}\right) + \log\left(\alpha\left(\frac{\Omega}{2(\theta+1)}\right)\right) \quad (12)$$

It is interesting to compare this utility to a world where there would be no potential conflict and thus no potential for predation, in this  $U = \log(C) + \log(\alpha K)$  and  $\Omega = C + K$ . The

optimal solution is given by  $C = K = \frac{\Omega}{2}$ , so that

$$U = \log\left(\frac{\Omega}{2}\right) + \log\left(\frac{\alpha\Omega}{2}\right) \quad (13)$$

Clearly (and as would be expected), (13) is greater than (12). Now let's compare utility where  $\alpha \neq \gamma$  and  $\varepsilon > 0$  with (12) and (13). Utility is given by

$$\log\left(\frac{\Omega}{2}\right) + \log\left(\gamma\left(\frac{\alpha\Omega}{2((1-\beta)\gamma\theta + \alpha(1-\varepsilon))}\right)\right) \quad (14)$$

This will be greater than (12) if

$$\frac{\gamma}{\alpha} > \frac{1-\varepsilon}{1+\beta\theta} \quad (15)$$

Interestingly, this tells us that even if  $\alpha > \gamma$ , utility may still be higher from investing in group identity if  $\varepsilon$  and/or  $\beta$  is large enough. This is due to the reduced need to invest in defensive arms, allowing more resources to be invested in capital albeit a form of capital that is less productive. Clearly, the result is obvious if  $\gamma > \alpha$ .

An interesting question is whether the potential for conflict leads to such a significant boost in group identity that  $\gamma > \alpha$  and allows for the possibility that potential conflict is actually better for group utility than there being no possibility of predation.

This will happen if

$$\frac{\gamma\alpha\Omega}{2((1-\beta)\gamma\theta + \alpha(1-\varepsilon))} > \frac{\alpha\Omega}{2} \quad (16)$$

which reduces to

$$\frac{\gamma}{\alpha} > \frac{(1-\varepsilon)}{1-(1-\beta)\theta} \quad (17)$$

Potential conflict can only lead to higher utility if  $\gamma > \alpha$ .<sup>2</sup>

Essentially, the higher growth rate provided by the prospect of conflict compensates for expenditure on defence. However, this defensive expenditure is limited by the higher

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<sup>2</sup> Note that if  $\gamma < \alpha$  then  $\varepsilon > (1-\beta)\theta$  but from (6) we know that this cannot hold because  $G$  would then be negative.

productivity of its use created by a relatively large  $\varepsilon$  (subject to  $\varepsilon < (1 - \beta)\theta$ ). It clearly also helps if the potential predator lacks offensive capability measured by a low value for  $\theta$ , and the less expropriable the capital the more likely is (17) to hold for values of  $\gamma$  not much greater than  $\alpha$ .

#### 4. Discussion

The simple extension presented here of the GK predator/prey approach to exploring security of property rights has three main components. First, the source of capital and its return becomes part of the analysis. Second, different forms of capital may be relatively more or less expropriable by the predator. Third, different forms of capital may have spillovers, for example, the willingness to make sacrifices for the group such as fighting harder and using arms more effectively.

We compare these features with an environment where one kind of capital (for example, physical) with no spillovers for fighting ability and where the capital return is completely expropriable. In this comparison, we find that although the return to group identity (as a form of social capital) may be lower than physical capital, the prey may still be better off if it could adopt group identity as its capital base. Group identity as a form of capital may be intrinsically hard to expropriate as it is embedded in the networks that exist within the group. This argument may even extend to the benefits that formal institutions yield as they may only function efficiently for the particular culture in which they were established. The prey would also be more likely to be better off adopting group identity as capital if it augments fighting ability. The result here links to the results of Gonzalez (2005 and forthcoming) in which he finds that a society may choose to adopt inferior technologies in order to avoid being attacked. In the set-up here though, the concepts of ‘choosing’ and ‘technology’ are quite different.

The most striking result is contained in (17), this suggests that hostile group interaction is potentially welfare-improving so long as the returns to group identity are greater than the returns to other forms of capital. However, this begs an obvious question. If group identity could yield the highest return why would this not always be selected as the capital base – even if the group existed alone in autarky?

A potential answer lies with the approach of Akerlof and Kranton’s theory of identity. Recall that they distinguish between (1) social categories, (2) norms associated with social categories and (3) utility which is affected by the extent to which an individual conforms or

departs from these norms. An obvious point is that group identity as a capital base cannot be chosen without the existence of an out-group which provides the very idea of group identity with meaning. To that end, it makes sense that welfare could be higher in a state of potential conflict because it generates a social category which could potentially generate norms that yield high returns if group members choose to conform to these norms.

Empirically, the analysis here raises an interesting issue. An implication from the economics of conflict literature is that it is not necessary to observe open conflict to conclude that conflict exists and generates social costs. Groups arm thus divert productive resources, but by doing so prevent further destructive conflict through their credible threat. So it would be tempting to conclude on observing a group or nation arming that the resources used for this provides a clear measure of the social costs of conflict.

The problem with this approach is that while arming does indeed divert productive resources, it could be that the group is more productive for the very reason that they potential face conflict. It would, therefore, be important to try and gauge the extent to which group identity and the social capital it forms and the returns to it have been formed by the potential for conflict itself.

Acemoglu, D., & Robinson, J. A. (2006). *Economic Origins of Dictatorship and Democracy*. Cambridge and New York: Cambridge University Press.

Akerlof, G. A., & Kranton, R. E. (2000). Economics and Identity. *Quarterly Journal of Economics*, 125(3): 715-753.

Alesina, A., & La Ferrara, E. (2005). Ethnic Diversity and Economic Performance. *Journal of Economic Literature*, 43(3): 762-800.

Amegashie, J. A., & Runkel, M. (2008). The Paradoxes of Revenge in Conflict. *CESifo Working Paper Series*, 2261.

Benabou, R., & Tirole, J. (forthcoming). Identity, Morals and Taboos: Beliefs as Assets. *Quarterly Journal of Economics*.

Bernhard, H., Fehr, E., & Fischbacher, U. (2006). Group Affiliation and Altruistic Norm Enforcement. *American Economic Review*, 96(2): 217-221.

Besley, T. (1995). Property Rights and Investment Incentives: Theory and Evidence from Ghana. *Journal of Political Economy*, 103(5): 903-937.

Bevia, C., & Corchon, L. C. (2010). Peace Agreements Without Commitment. *Games and Economic Behavior*, 68: 469-487.

Blattmann, C., & Miguel, E. (2010). Civil War. *Journal of Economic Literature*, 48(1): 3-57.

- Bloch, F., Sanchez-Pages, S., & Soubeyran, R. (2006). When does universal peace prevail? Secession and group formation in conflict. *Economics of Governance*, 7: 3-29.
- Bloch, F., Sanchez-Pages, S., & Soubeyran, R. (2006). When does universal peace prevail? Secession and group formation in conflict. *Economics of Governance*, 7: 3-29.
- Bornstein, G. (2003). Intergroup Conflict: Individual, Group, and Collective Interests. *Personality and Social Psychology Review*, 7(2): 129-145.
- Bornstein, G., Gneezy, U., & Rosemarie, N. (2002). The effect of intergroup competition on group: an experimental study. *Games and Economic Behavior*, 41: 1-25.
- Brown, R. (2000). *Group Processes: Dynamics Within and Between Groups, 2nd Ed.* Oxford: Blackwells.
- Charness, G., Rigotti, L., & Rustichini, A. (2007). Individual Behavior and Group Membership. *American Economic Review*, 97(4): 1340-1352.
- Chen, Y., & Li, L. S. (2009). Group Identity and Social Preferences. *American Economic Review*, 99(1): 431-457.
- Colier, P. (1999). On the Economic Consequences of Civil War. *Oxford Economic Papers*, 51(1): 168-183.
- Erev, I., Bornstein, G., & Galili, R. (1993). Constructive Intergroup Competition as a Solution to the Free Rider Problem: A Field Experiment. *Journal of Experimental Social Psychology*, 29: 463-478.
- Fearon, J. D. (1995). Rationalist Explanations for War. *International Organization*, 49(3): 379-414.
- Fearon, J. D., & Laitin, D. D. (1996). Explaining Interethnic Cooperation. *American Political Science Review*, 90(4): 715-735.
- Ferguson, N. (2002). *The Cash Nexus: Economics and Politics from the Age of Warfare through the Age of Welfare, 1700-2000.* New York: Basic Books.
- Garfinkel, M. R., & Skaperdas, S. (2007). Economics of Conflict: An Overview. In T. Sandler, & K. Hartley, *Handbook of Defense Economics (Volume 2)*. New York: North-Holland.
- Goette, L., Huffman, D., & Meier, S. (2006). The Impact of Group Membership on Cooperation and Norm Enforcement: Evidence Using Random Assignment to Real Social Groups. *American Economic Review*, 96(2): 212-216.
- Gonzalez, F. (forthcoming). The Use of Coercion in Society: Insecure Property Rights, Conflict and Economic Backwardness. In M. R. Garfinkel, & S. Skaperdas, *Oxford Handbook of the Economics of Peace and Conflict*. Oxford: Oxford University Press.
- Gonzalez, F. M. (2005). Insecure Property and Technological Backwardness. *The Economic Journal*, 115: 703-721.

- Gorodnichenko, Y., & Roland, G. (2011). Which Dimensions of Culture Matter for Long-Run Growth? *American Economic Review*, 101(3): 492-498.
- Greenfeld, L. (2001). *The Spirit of Capitalism: Nationalism and Economic Growth*. Cambridge, Massachusetts, and London, England: Harvard University Press.
- Grossman, H. I., & Kim, M. (1995). Swords or Plowshares? A Theory of the Security of Claims to Property. *Journal of Political Economy*, 103(6): 1275-1288.
- Grossman, H. I., & Kim, M. (1996). Predation and Accumulation. *Journal of Economic Growth*, 1: 333-350.
- Halevy, N., Bornstein, G., & Sagiv, L. (2008). "In-Group Love" and "Out-Group Hate" as Motives for Individual Participation in Intergroup Conflict. *Psychological Science*, 19(4): 405-411.
- Hillman, A. L., & Swank, O. (2000). Why political culture should be in the lexicon of economics. *European Journal of Political Economy*, 16(1): 1-4.
- Kuran, T. (1998). Ethnic Norms and Their Transformation through Reputational Cascades. *Journal of Legal Studies*, 27(2): 623-659.
- McLeish, K. N., & Oxoby, R. J. (2011). Social interactions and the salience of social identity. *Journal of Economic Psychology*, 32: 172-178.
- Münster, J., & Staal, K. (2011). War with Outsiders Makes Peace Inside. *Conflict Management and Peace Science*, 28(2): 91-110.
- Sanchez-Pages, S. (2006). On the social efficiency of conflict. *Economics Letters*, 90: 96-101.
- Sen, A. (2006). *Identity and Violence: The Illusion of Destiny*. London: Allen lane.
- Tabellini, G. (2008). Institutions and Culture. *Journal of the European Economic Association*, 6(2-3): 255-294.
- Tajfel, H. (1981). *Human Groups and Social Categories*. Cambridge: Cambridge University Press.
- Wintrobe, R. (1995). Some economics of ethnic capital formation and conflict. In A. Breton, G. Galeotti, P. Salmon, & R. e. Wintrobe, *Nationalism and Rationality*. Cambridge: Cambridge University Press.