

RATIONALITY, TRUST, AND COLLECTIVE ACTION: ARGENTINA'S MOTHERS OF PLAZA DE MAYO.

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Abstract

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How did a group of mothers of youngsters who had been illegally detained and later murdered by Argentina's 1976-1983 dictatorship, manage to organize and protest during this period of severe state repression? Under what conditions would a rational individual choose to risk her life by engaging in collective activities subjected to the free rider problem? Combining the insights of a step public goods model and the encapsulated-interest theory of trust, I show that in spite of the high levels of uncertainty and risk involved in participation, collective action was possible given credible mutual commitments inherent in participation, and due to the provision of selective incentives to the members. These findings are confirmed by later developments: once a democratic transition occurred and the risk and uncertainty levels diminished, the group split into two different associations.

Keywords: *Trust, Collective Action, Argentina, Rationality*

RACIONALIDAD, CONFIANZA Y ACCIÓN COLECTIVA: LAS MADRES DE PLAZA DE MAYO EN ARGENTINA.

Resumen

¿Cómo un grupo de madres de jóvenes detenidos ilegalmente y posteriormente asesinados por la dictadura argentina de 1976-1983, lograron organizar y protestar durante este período de severa represión estatal? ¿Bajo qué condiciones un individuo racional escogería arriesgar su vida participando en actividades colectivas sometidas al problema del polizón? Combinando las ideas de un modelo de provisión de bienes públicos y la teoría de la confianza del interés encapsulado, demuestro que a pesar de los altos niveles de incertidumbre y riesgo involucrados en la participación, la acción colectiva fue posible gracias a compromisos mutuos creíbles inherentes a la participación y debido a la provisión de incentivos selectivos de los miembros. Estos hallazgos son confirmados por desarrollos posteriores: una vez que se produjo una transición democrática y los niveles de riesgo e incertidumbre disminuyeron, el grupo se dividió en dos asociaciones diferentes.

Palabras clave: *Confianza, Acción Colectiva, Argentina, Racionalidad*

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1. Rationality, trust, and collective action

The issue of collective action has long captured the attention of scholars across the social sciences and it is the central concept at stake in the case of the mobilization of the Mothers of Plaza de Mayo during a highly repressive regime, which is discussed in this paper. The problem of collective action has been studied through two major analytical traditions: public goods and game theory (originally the Prisoner's Dilemma, Hardin 1971). In regard to the latter, we know from the folk theorem that when the discount factor is sufficiently close to one, equilibria with cooperation are reachable in infinitely iterated n -Prisoner's Dilemma, a result that is also supported by experimental data (first shown by Axelrod's simulated tournaments).²

From the perspective of public goods analysis, Olson's *The Logic of Collective Action* (1965) re-framed the debate on interest group dynamics. He questioned the rationale for the formation of groups with collective goals since it implies non-excludability of non-contributors and thus offers incentives for free-riding. In the author's account, whenever the net gains from participating are non-positive for all individuals, the group is latent and will not coordinate. Latency, in turn, is tightly linked to group size. Self-interested individuals in larger groups are more likely to fail to act in their common interest for three reasons. First, whenever the collective good is subject to crowding (or rivalry of consumption) the rewards of participation decline as size increases; second, the costs are likely to rise as the number of people to be coordinated increases; and third, the larger the group, the more likely it is to be latent (Hardin 1982).

However, we often observe large successful groups. In explaining coordination in some otherwise latent groups, Olson invokes the presence of any of the following: (1) entrepreneurs with gains to be made by working on the provision of collective goods, (2) rewards available to members only, and (3) non-rational considerations. Olson's main contribution has received extended attention and criticism. The idea of selective incentives has been questioned [see Oliver (1980), Hardin (1982), Elster (1988)]; a main criticism is due to its time inconsistency when considering empirics: selective incentives are generally a product of the success of the group and not its cause, which leaves unexplained the issue of why a group is able to coordinate in the first place. A similar argument challenges the explanatory power of the presence of entrepreneurs. Finally, non-rational (i.e. moral) considerations have been used widely, notably in voting models attempting to account for voter turnout through the inclusion of a "duty term" (see Riker and Ordeshook 1967). Chamberlin (1974) is among the first critics who pointed out that Olson's results were reversed if the collective good is non-rival, which is, if consumption by others does not affect an individual's consumption then large groups are more effective in providing a collective good. Olson's and Chamberlin's results have been weakened by later findings. Motivated by compelling examples that state the empirical regularity that small groups often attempt to grow their membership in order to achieve their policy goals and that they never break up to become more powerful, Esteban and Ray (2001) show that when marginal costs rise quickly relative to contributions, the win probability of large groups is higher than that of small ones.

Under what conditions is it rational to contribute towards the provision of a public good? Specifically, how are payoffs altered when players are in a situation of extreme risk as the Mothers of Plaza de Mayo were? A game theory model may explain a cooperative result but by definition cannot account for the reasons why cooperative players expect to be reciprocated

² The experimental literature has provided useful information in an attempt to reconcile theoretical predictions and actual outcomes (see Holt and Laury 1997 for a review).

in order to achieve the collective goal. In order to explain cooperative expectations we need to resort to the literature on trust. What is the relationship between cooperation and trust? More specifically, do we need to trust those whom we engage in cooperation with? Game theory models only capture this feature of human interaction through iterating a game. However, trust may certainly induce cooperation. A growing strand of literature studies trust relations among individuals. There are broadly two standard theories that conceive trust as a rational decision: those based on the richness of social relations and the encapsulated-interest account. The first view focuses on the expectation of reciprocal cooperation given the possibility of repeated interaction in the future, shared interests and values, and common past experiences (see, for example, Hawthorn 1988, Williams 1988, Warren 1999). The idea is that there is some general predisposition to collaborate with others: “[...] in general, people will not trust others enough in order to bring about cooperation unless their assurance is to some extent well based; that is to say, unless people are also in general motivated, one way or another, not to defect if they are in a dependent position.” (Williams 1998:8). Note that in this definition, there is a requirement for a predisposition to collaborate that is not specific to a relationship in particular, but a shared mood or predisposition to cooperate with peers, presumably in a specific group.

According to the encapsulated-interest theory of trust, developed by Hardin, “[...] what it is rational (in one’s interests) to do depends on who one is in the sense that it depends on what knowledge one has (1995:17).” In this view, individual’s rational decisions are to a great extent a product of the information, social/other experiences and beliefs he has, and it represents a constraint on the set of choices perceived as available. Furthermore, trust is essentially rational, a cognitive notion that typically involves risk: “[...] I trust you because your interest encapsulates mine, which is to say that you have an interest in fulfilling my trust. It is this fact that makes my trust more than merely expectations about your behaviour. Any expectations I have are grounded in an understanding (perhaps mistaken) of your interests specifically with respect to me.” (Hardin 2002: 3). Note that in the encapsulated interest account what matters is the existence of credible mutual commitments³ between the partners in a trust relation that binds them to trust each other.

This paper contributes with the analysis of a case study –the Mothers of Plaza de Mayo’s ability to mobilize under state terror - that allows us to trace the approach of trust as rationality in combination with a standard game theory model of public goods provision. Testing for the encapsulated-interest and the thick-relationship theories is futile in laboratory settings assessing how players play a cooperation, given that participants do not know each other (Hardin 2003). Hence, an advantage of employing a case study resides in the possibility to factor context into the analysis. I contend that the encapsulated-interest theory of trust, under conditions of immense risk, explains cooperation. Additional proof of this fact is that, as will be shown, once the risk level diminished, cooperation ceased.

The case study to be analyzed is the humanitarian advocacy group named Mothers of Plaza de Mayo, which emerged under a highly repressive regime in Argentina and survived the dictatorship. I contend that the extreme conditions of risk and uncertainty under which the interaction in this case took place allowed for collective action to actually occur. Additionally, because the players in the game did not know each other, the case offers the opportunity to empirically assess the theories of trust based on thick relationship versus encapsulated interest, the latter modelled as a single step public goods model. The relevance of this case resides in the fact that costs were considerably high: Why would anybody risk her life by participating? This paper proceeds as follows. Section 2 provides context about the issues at stake in the case

³ Applied at the institutional level, Sanchez-Cuenca (1998) understands a credible commitment as a manipulation of one’s set of alternatives.

of the Mothers of Plaza de Mayo. Section 3 presents an account of the costs and benefits faced by the players. In Section 4, I develop a single step public goods model and briefly investigate the effects of modifications in the cost of participation on the incentive structure. Section 5 explains how trust is built among group members drawing on the encapsulated interest theory of trust. Section 6 concludes.

2. The Mothers of Plaza de Mayo

Argentina experienced the highest number of transitions to dictatorship in the world in the period 1945-1990.⁴ The most repressive of all its dictatorial regimes began on March 24th of 1976 and was known as the “Process of National Reorganization.” When the military took over power, there was widespread support for the move among the population. Indeed, President Maria Estela Martinez de Peron, who governed the country from mid-1974 to the beginning of 1976, led a government characterized for weak public management. Under her rule, the Anti-Communist Argentinean Alliance (AAA) was created and it secretly operated as the instrument of state terrorism against the left wing of Peronism, a working class based political party founded by General Peron. These were the circumstances under which, claiming the need to bring order to the disastrous state in which the Peron administration had put the country, a military junta overthrew President Martinez de Peron and appointed General Videla as the new *de facto* head of state.

The “Process of National Reorganization” introduced the most violent period of state terror in Argentina’s history. The mode of operation of the groups of terror consisted in kidnapping, torturing and murdering individuals who were suspected to oppose the military regime. Many of the victims were young students thought to be linked to the Peronist Youth or to Communist parties, although in many cases there was no relation between the victim and any political organization at all.⁵ As a result of the violence, estimates indicate that around 30,000 people disappeared during those years presumably held in one of the estimated 340 clandestine detention centers (Fisher 1989: 62).

The Mothers of Plaza de Mayo are the mothers of those Argentineans who disappeared mainly during the Process of National Reorganization, but also by the action of the AAA. The testimonies compiled by the agency that later investigated the disappearances (CONADEP) show that the groups of operations would sometimes act in a violent fashion at the moment of the detention, accuse the to-be disappeared of subversive, or just claim politely that she would be taken only for a couple of hours for interrogation. Information at the time of the detention was thus misleading; only in time it became clear what the real situation was.

While queuing at the Ministry of Interior, at Police headquarters, at human rights organizations, at churches, and several other institutions, a group of mothers began to recognize each other’s faces. Eventually, in April 1977, Azucena Villaflor de Vincenti, who later became the first president of the organization, suggested that they all met at the Plaza de Mayo in Buenos Aires. The idea was that, being more than one, Videla [the *de facto* chief executive] would have to meet with them (Madres Linea Fundadora web site – MFL in references). Although the choice of the Plaza de Mayo could be interpreted as a symbol of freedom (it is a public forum where, historically, people would gather to discuss their views, Mellibovsky 1990), it also has an instrumental value. Its location (in front of the Pink House, the offices of

⁴ See Przeworski et al. (2000).

⁵ It was enough that a person’s name was listed in a “suspect’s” telephone agenda to be a target for the repression. (CONADEP 1997).

the executive power of Argentina) allows for the maximization of the chances to contact key government officials, and being a crowded area, it facilitated the dissemination of the mother's claims.⁶ The next section discusses the incentive scheme faced by each mother in deciding whether to participate in the group's activities.

Spontaneity seems to have been the pattern in the first steps the mothers took. The marching around the Pyramid at the Plaza was not intended: at first, the mothers gathered in a bench at the Plaza, but the police forced them to move, alleging that under state of emergency meetings of more than two people were not allowed. That was how they started to walk in pairs, holding arms, around the Pyramid. Even the characteristic piece of white cloth that the mothers wear in their heads was accidental. When deciding to go to a crowded march to the Virgin of Lujan, they were wondering how they would recognize each other. They decided to use white cloth-nappies, which they all kept as a memory from the times their children were babies.

The first 14 women that went to the Plaza the first time did not know each other, but shared similar concerns. As Hebe de Bonafide, President of the Asociación Plaza de Mayo, puts it: "The Mothers were created because (...) we were equal; our children had been taken, we were all going through the same, we had all been to the same places. And it was like there was no distance between us. That is why the Plaza grouped us. That is why the Plaza consolidated us." (Hebe de Bonafini in AMPM 1995:7, my translation) In the compilation of testimonies by Mellibovsky (1990), one of the mothers expresses how hard it was for her to decide to go to the Plaza. She would think that she would not go again due to the physical insecurity that it involved, but the next Thursday she could not resist to go. She further asserts that "I even realized very soon that between the women [at the Plaza] we told each other things that we would not even tell our husbands. Well, the first rounds at the Plaza had that appeal but at the same time they were intriguing: the consciousness that we had to come back and the fear." (Mellibovsky 1990: 104)

From the perspective of new members, once the group was consolidated, some questions arose at the time of assessing whether to participate in group activities. Questions such as: do these women demand anything in particular to members? A mother's testimony reveals that when she managed to approach the group, the only thing she was asked was who had "disappeared" in her family. Liliana recalls: "I felt that we were all the same person, I felt that I had found a place from where to fight." (Muñoz and Portillo 1986).

In summary, the mothers met by chance and perceived themselves as equals in their concerns. But, why would any of them risk her life in going to the Plaza? What were the relations between risk, uncertainty, cost and benefits that allowed for such a rational choice? Was it rational to make such a decision at all? The next section addresses these questions.

3. Costs and benefits of cooperation

Let us first concentrate on selective incentives, that is, the excludable benefits derived from group membership. First, consider the "solidary benefit" involved in participation. As mentioned above, the group of women that went to the Plaza the first time did not know each other in depth but shared concerns for the whereabouts of their children. The fear of the state's potential retaliation made it valuable for the Mothers to develop a network in which they could interact socially. Indeed, the regime had done a good job in advertising its crusade against the

⁶ In time, many more mothers joined them. Ever since 1977, the mothers have gathered at the Plaza every Thursday, claiming that justice be made in regard to the "disappeared."

“terrorists”⁷ and there was the belief that if somebody “disappeared” he or she must have been involved in terrorist activities. Nevertheless, as was later confirmed, many of the “disappeared” had no relation with any armed dissident group. In many senses, those looking for their loved ones were actually excluded from their groups because of having a “disappeared” in the family. In some cases, friends of a lifetime refused to help in the task of finding out about the whereabouts of disappeared relatives (Mellibovsky 1990:115). During this period a social phenomenon informally known as “the culture of ‘no te metas’” which means, “do not interfere” developed in Argentina. It refers to the fact that potential witnesses of abuses perpetrated by the state were better off by ignoring it than by taking active sides on it. A witness of a kidnapping reports the following: “[...] With a great deal of violence, they were taking the boy away. I turned off the light, and peeked through a tiny opening in the curtain. ‘I’ll be safer in the dark,’ I thought.” (Feitlowitz 1998: 89-90). For these reasons, it seems that those individuals who were in the search of their relatives were victims, to some extent, of social exclusion. In the words of Hebe de Bonafini, “[...] in those days we were looked down to, our families became the families of the “terrorists,” doors were closed to us, we could talk to very few people” (in AMPM 1998:7, my translation).

Second, consider the “purposive benefit” derived from having done something for the missing children. Renee Epelbaum’s words reveal her belief that she had to do something about the situation: “[...] Because at the moment that everyone was terrified we overcame this fear. It wasn’t that we weren’t afraid. We were, but we overcame it, because of our obligation (to our children) and our desperation” (Muñoz and Portillo 1986). Third, the group was a valuable source of information. While the individual search did not stop with membership, the weekly meetings served as sources of more effective technologies of searching for the missing children.

The non-excludable benefit that the group provided was to bring the issue to the public light, in particular, to the international community. Indeed, media censorship resulted in no local coverage on the issue of the “disappeared.” Besides, major domestic newspapers *Clarín*, *La Nación* and *La Prensa* had joined with the government to form Papel Prensa, which regulated the flow of paper for all publications.⁸ Then, it was in the economic interest of major written media enterprises to sustain the government regardless of the level of media censorship. As a result, only foreign media discussed information on state repression (Knudson 1997), thus leaving the national public unaware of either the existence of the phenomenon or its extent.

Let us now look at the costs. First, we will refer to the risk of being punished by the military regime. Patricia Derian, Assistant Secretary of State for Human Rights – who visited Argentina during the “Process of National Reorganization” in order to investigate human rights violations-, clearly stated the risks involved in protesting: “[...] I heard about the women of Plaza de Mayo. And they were essential to see in a situation in which you have a government [...] trying in every way to terrorize the population, somebody in the place has to have the courage to risk everything: life, property, work, and say: no, this is wrong.” (in Susana Muñoz and Lourdes Portillo 1986). Once an individual decides to participate in a potentially more effective way of looking for her relatives than doing it alone, she accepts to take more risks than she would face looking on her own. Although it was more effective to proceed with the demands as a group, it implied extra exposure.

⁷ According to Fuster, the government hired the firm “Burston & Marsteller” to launch a campaign to improve the image of the country. When the country hosted the Soccer World Cup in 1978, the slogan disseminated was: “Argentines are of rights and human” (Fuster 2001)

⁸ Source: Jorge Lanata, Letter to Committee for the Protection of Journalists, September 8, 1993 ; cited in Knudson (1997: 100)

The protests of the Mothers in times of state repression and the strategies that they employed to protect themselves caused them to be known as the “Mad Women of Plaza de Mayo.” For example, when the police took the ID from one of them at Plaza de Mayo, all the others would submit theirs too, making it unmanageable for the policeman to deal with over 300 IDs. In another story, at the time when U.S. official Terence Todman visited Argentina, the mothers took the opportunity to express their concerns at the Plaza, a reason for which the government sent soldiers who aimed their guns at the mothers. The mothers, holding each other’s arms, shouted: “fire,” and thus captured the attention of the journalists that were there to see Todman. Another example of this type of behaviour was observed with regard to arrests. Regularly, as the mothers refused to leave the Plaza, they would be taken to the police station. But then, if one mother was taken, all of them asked to go with her. If the police did not have enough cars, then they would show up at the police station were the other mothers were held and requested to be detained as well (AMPM 1995: 9-20).

In conclusion, the mothers enjoyed benefits from organizing as a group. But such organization implied facing greater risks and was therefore costly. Then, why would any of them risk her life by gathering at the Plaza? What were the relations between costs and benefits of membership that allowed for such a choice? The next section attempts to formalize an answer to these questions.

4. A simple model

4.1. The setup

I model the situation described above as a step-level public goods game. This section follows Palfrey and Rosenthal (1984), with the difference -in terms of modelling- that I am incorporating selective incentives in an application to this case. The players are $i \in M = \{1, \dots, M\}$. M represents the number of mothers of those disappeared during the repression, which I assume to be a positive constant.⁹ Each player i decides whether to participate or not in the group activities. The representative mother’s strategy space is given by $S_i^M = \{\text{Participate, Not Participate}\}$. If a player decides not to participate in group activities, she gets a payoff equal to 0, which is her reservation payoff. The cost of joining the group, which involves risking personal physical security given that the government always represses, is denoted by c .

The group provides two types of public goods: non-excludable -from which “ d ” utils are derived- and excludable - which provides ($s(i,p,o)$ utils); d refers to the salience that the group is able to provide to the issue which we assume to be equal to 1. In turn, $s(i,p,o) = i + p + o$ where i ($i > 0$) stands for the utility derived from gaining access to information, p ($p > 0$) stands for the utility derived from the “purposive benefit” and o ($o > 0$) stands for the utils that each mother derives from the “solidary benefit.”¹⁰ From now on, I will refer to $s(i,p,o)$ as s only. Since the salience that the issue adopted both domestically and internationally was decisive to trigger the official inquiries about the whereabouts of the disappeared and the trials of military men, $d > s$. The provision of the public good depends on the fact that the number of players participating (M_p) reaches a threshold τ . The payoffs are as follows:

⁹ The number of disappeared is estimated to be of 30,000.

¹⁰ This imposes a strong restriction, that is, that neither the salience of the issue nor the information is independent of the number of participants. I am treating this as binary; in the former case, whether the issue is made public or not and in the latter, whether the mothers have access to information (no matter how much) or not.

If $M_p < \tau$ and $s_i = \text{Participate}$, i receives $-c$
 If $M_p < \tau$ and $s_i = \text{Not participate}$, i receives 0
 If $M_p \geq \tau$ and $s_i = \text{Participate}$, i receives $(d + s) - c$
 If $M_p \geq \tau$ and $s_i = \text{Not Participate}$, i receives d
 with $d, s, c > 0$, $d = 1 > s$ and $(d + s) - c > 0$.

4.2. Equilibrium analysis

Let us analyze the equilibrium of this game in pure strategies. If $\tau = 1$, that is, if the participation of one player enables the provision of the public goods then there is an equilibrium in which one player participates and pays the cost c while $M - 1$ players free-ride. The player contributing has no incentives to deviate, because if he did he would receive a payoff of 0 instead of $[(1 + s) - c] > 0$ which he receives when contributing. If $\tau > 1$, there are $\binom{M}{\tau}$ equilibria with τ players paying the cost c while $M - \tau$ players do not participate. There is also an inefficient Nash equilibrium in which nobody contributes.

Consider the equilibrium analysis in mixed strategies. As in Palfrey and Rosenthal (1984), I divide the players into three categories: mixers ($x \in X$), those that participate (referred to as “ppate”) in pure strategies ($p \in P$) and those that do not ($n \in N$). Thus, $M = X + P + N$. Note that I will impose symmetry: any member of X participates with probability σ . I refer to the number of mixers that participate as x_p and to those that participate other than individual i as $x_{p \sim i}$.

The expected payoff of participating (“ppate”), $E[U_{i \in X}^{ppate}]$, is given by:

$$\begin{aligned} & \Pr\{x_{p \sim i} \geq \tau - p - 1\}(1 + s - c) + \Pr\{x_{p \sim i} < \tau - p - 1\}(-c) \\ &= \Pr\{x_{p \sim i} \geq \tau - p - 1\}(1 + s - c) + (1 - \Pr\{x_{p \sim i} \geq \tau - p - 1\})(-c) \\ &= \Pr\{x_{p \sim i} \geq \tau - p - 1\}(1 + s) - \Pr\{x_{p \sim i} \geq \tau - p - 1\}c - c + \Pr\{x_{p \sim i} \geq \tau - p - 1\}c \\ &= \Pr\{x_{p \sim i} \geq \tau - p - 1\}(1 + s) - c \end{aligned}$$

The expected payoff of not participating (“notppate”), $E[U_{i \in X}^{notppate}]$, is:

$$\Pr\{x_{p \sim i} \geq \tau - p\}1 + \Pr\{x_{p \sim i} < \tau - p\}0 = \Pr\{x_{p \sim i} \geq \tau - p\}$$

For the members of X , the equilibrium condition requires that $E[U_{i \in X}^{notppate}] = E[U_{i \in X}^{ppate}]$.

Then,

$$\Pr\{x_{p \sim i} \geq \tau - p\} = \Pr\{x_{p \sim i} \geq \tau - p - 1\}(1 + s) - c$$

and c equals

$$c = \Pr\{x_{p \sim i} \geq \tau - p - 1\}1 + \Pr\{x_{p \sim i} \geq \tau - p - 1\}s - \Pr\{x_{p \sim i} \geq \tau - p\}$$

$$\begin{aligned}
c &= Pr\{x_{p \sim i} = \tau - p - 1\} + Pr\{x_{p \sim i} \geq \tau - p - 1\}s \\
c &= \binom{M-p-n-1}{\tau-p-1} \sigma^{\tau-p-1} (1-\sigma)^{M-\tau-n} \\
&+ \left(\sum_{L=\tau-p-1}^{L=M-p-n-1} \left(\binom{M-p-n-1}{L} \sigma^L (1-\sigma)^{M-p-n-1-L} \right) \right) s
\end{aligned}$$

For the members of P :

$$E[U_{i \in X}^{notppate}] \leq E[U_{i \in X}^{ppate}]$$

$$Pr\{x_p \geq \tau - p + 1\} \leq Pr\{x_p \geq \tau - p\}(1 + s) - c$$

thus,

$$c \leq Pr\{x_p \geq \tau - p\}1 + Pr\{x_p \geq \tau - p\}s - Pr\{x_p \geq \tau - p + 1\}$$

$$c \leq Pr\{x_p = \tau - p\} + Pr\{x_p \geq \tau - p\}s$$

$$c \leq \binom{M-p-n}{\tau-p} \sigma^{\tau-p} (1-\sigma)^{M-\tau-n} + Pr\{x_p \geq \tau - p\}s$$

$$c \leq \binom{M-p-n}{\tau-1} \sigma^{\tau-p} (1-\sigma)^{M-\tau-n} + \left(\sum_{L=\tau-p}^{L=M-p-n} \left(\binom{M-p-n}{L} \sigma^L (1-\sigma)^{M-p-n-L} \right) \right) s$$

For the members of N :

$$E[U_{i \in X}^{notppate}] \geq E[U_{i \in X}^{ppate}]$$

$$Pr\{x_p \geq \tau - p\} \geq Pr\{x_p \geq \tau - p - 1\}(1 + s) - c$$

therefore,

$$c \geq Pr\{x_p \geq \tau - p - 1\}1 + Pr\{x_p \geq \tau - p - 1\}s - Pr\{x_{p \sim i} \geq \tau - p\}$$

$$c \geq Pr\{x_p = \tau - p - 1\} + Pr\{x_p \geq \tau - p - 1\}s$$

$$c \geq \binom{M-p-n}{\tau-p-1} \sigma^{\tau-p-1} (1-\sigma)^{M-\tau-n+1} + Pr\{X_p \geq \tau - p - 1\}s$$

$$c \geq \binom{M-p-n}{\tau-p-1} \sigma^{\tau-p-1} (1-\sigma)^{M-\tau-n+1} + \left(\sum_{L=\tau-p-1}^{L=M-p-n} \left(\binom{M-p-n}{L} \sigma^L (1-\sigma)^{M-p-n-L} \right) \right) s$$

The triples of the type (p^*, n^*, σ^*) that satisfy the above three conditions constitute Nash equilibria. Consider equilibria of the type $(0, 0, \sigma)$. Thus, every player participates with probability σ and the equilibrium condition becomes:

$$c = \binom{M-1}{\tau-1} \sigma^{\tau-1} (1-\sigma)^{M-\tau} + \left(\sum_{L=\tau-1}^{L=M-1} \left(\binom{M-1}{L} \sigma^L (1-\sigma)^{M-1-L} \right) \right) s$$

Multiple equilibria result. In Table 1, I simulate values of M , τ , σ , and s in order to obtain c . Let us assume $M = 1,000$ (which we could hypothesize as the number of mothers actively inquiring about the whereabouts of their offspring) and $\tau = 300$ (as in the example described in Section 3). Let us recall that τ is the number of participants required to provide the public good. We have empirical information that allows us to make a reasonable assumption about the values of M and τ , but we remain uncertain about the values of σ (the probability that an individual participates in group activities), and s (benefits derived from group membership).

From this exercise, we learned that for those values of M and τ , the expression $(\sum_{L=\tau-1}^{L=M-1} \binom{M-1}{L} \sigma^L (1-\sigma)^{M-1-L})$ approaches 1 as σ gets closer to 0.4. On the other hand, since $\binom{M-1}{\tau-1} \sigma^{\tau-1} (1-\sigma)^{M-\tau} \rightarrow 0$, the value of c is defined by s for $\sigma \in [0.4, 1)$. Thus, as σ goes up, c goes up, growing fastest in the interval $[0.2, 0.3]$.

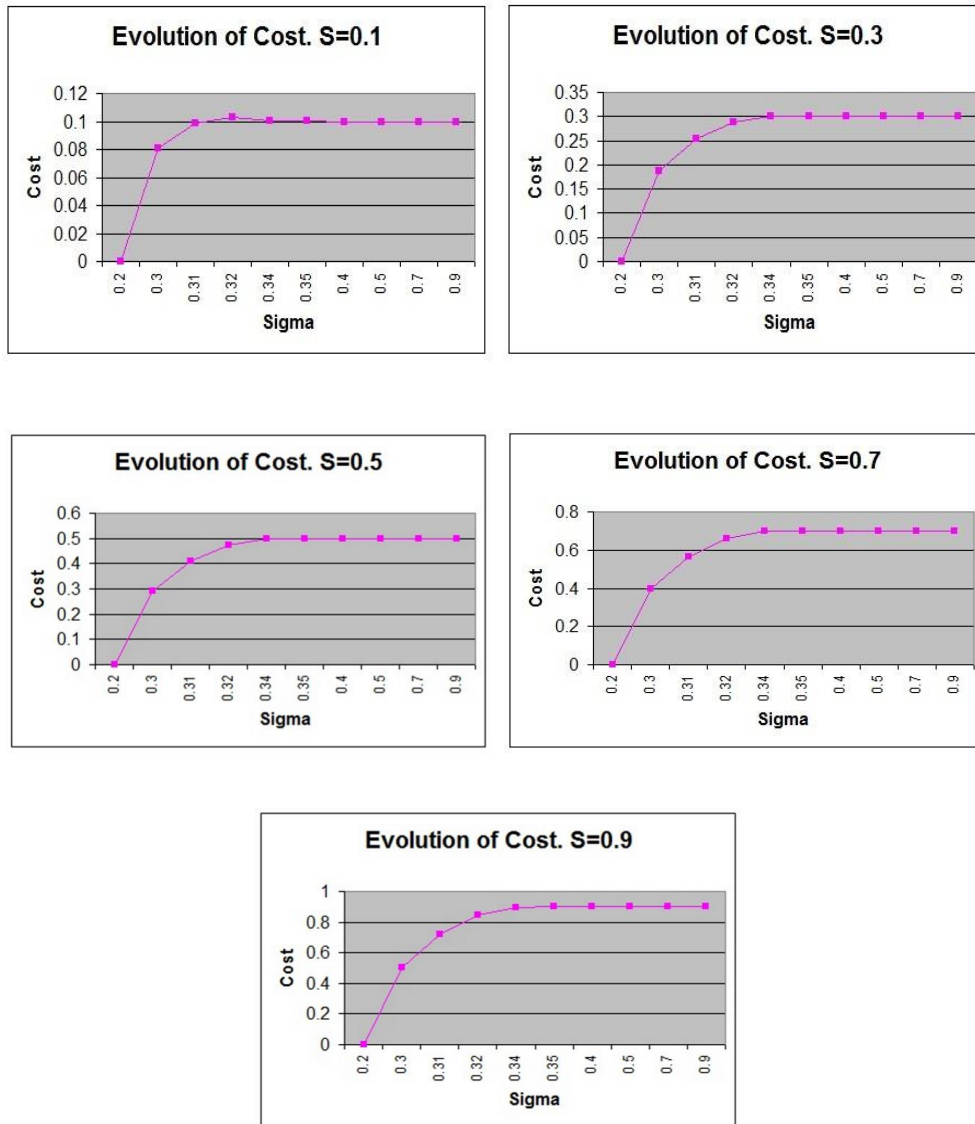
Table 1: Simulated values of c for the indicated values of σ and s that satisfy the equilibrium condition. $M = 1,000$ and $\tau = 300$.

σ	s	c	σ	s	c	σ	s	c
0.2	0.1	2.98825E-14	0.31	0.9	0.720775404	0.35	0.7	0.699874973
0.2	0.3	4.1367E-14	0.32	0.1	0.102704727	0.35	0.9	0.899815073
0.2	0.5	5.28515E-14	0.32	0.3	0.287748756	0.4	0.1	0.1
0.2	0.7	6.4336E-14	0.32	0.5	0.472792784	0.4	0.5	0.5
0.2	0.9	7.58205E-14	0.32	0.7	0.657836812	0.4	0.9	0.9
0.3	0.1	0.080640222	0.32	0.9	0.84288084	0.5	0.1	0.1
0.3	0.3	0.18687866	0.34	0.1	0.100361567	0.5	0.5	0.5
0.3	0.5	0.293117097	0.34	0.3	0.299808962	0.5	0.9	0.9
0.3	0.7	0.399355534	0.34	0.5	0.499256357	0.7	0.1	0.1
0.3	0.9	0.505593972	0.34	0.7	0.698703752	0.7	0.5	0.5
0.31	0.1	0.098798946	0.34	0.9	0.898151147	0.7	0.9	0.9
0.31	0.3	0.254293061	0.35	0.1	0.100054671	0.9	0.1	0.9
0.31	0.5	0.409787175	0.35	0.3	0.299994771	0.9	0.5	0.1
0.31	0.7	0.565281289	0.35	0.5	0.499934872	0.9	0.9	0.9

Figure 1 shows the evolution of c as σ increases from 0.2 to 0.9 for the indicated fixed values of s . The graphs tie the different levels of the cost of joining the group with the probability that any individual will join given fixed levels of benefits from group membership (from low ($s=0.1$) to high ($s=0.9$)) with M fixed at 1,000 and $\tau=300$ as assumed above. As we observe, c reaches its maximum after somewhere between 0.3 and 0.4 in the x axis (where we measure σ), regardless of the value of s .

The implications of the simulation for our analysis of mixed strategy equilibria of the type $(0,0, \sigma)$ are straightforward. Given $M = 1,000$ and $\tau = 300$, once the probability of participation reaches the neighbourhood of 0.4 and thereafter, selective incentives are equal to the cost ($s = c$) for the equilibrium condition to hold. Overall, as expected, collective action is supported both in pure strategies and in mixed strategies when we include selective incentives in the game. This is also true when there are no selective incentives (i.e., when $s = 0$).

Figure 1: Evolution of the cost of joining the group



I explored a case in which $\tau = 100$ and $M = 1,000$ as before (table not shown). I found that since $\binom{M-1}{\tau-1} \sigma^{\tau-1} (1-\sigma)^{M-\tau} \rightarrow 0$ as σ increases and in turn

$$\left(\sum_{L=\tau-1}^{L=M-1} \left(\binom{M-1}{L} \sigma^L (1-\sigma)^{M-1-L} \right) \right) s = 1$$

for any values of s and σ , then the value of c in the equation for the equilibrium condition is driven by the value of s .

What would happen, in mixed strategies equilibria, if more women were needed at the Plaza in order to produce the public good? Table 2 shows the impact on the relevant variables when, ceteris paribus, $\tau = 500$ (see table below). For any given value of the benefits derived

from group membership (s), the risk of suffering government repression (c) increases as the probability that the Mothers who mix strategies participate (σ) increases. Comparing Tables I and II, we observe that as the threshold (τ) increases the equilibrium conditions are satisfied with a positive correlation between selective incentives and costs. When the minimum number of participants required to provide group benefits increases from 300 to 500, the benefits to those mothers participating in group activities augment as the individual risks faced by those individuals who join the Mothers increase.

Table 2: Simulated values of c for the indicated values of σ and s that satisfy the equilibrium condition. $M = 1,000$ and $\tau = 500$.

Σ	s	C	σ	s	c	Σ	s	c
0.2	0.1	7.69E-98	0.31	0.9	1.46142E-35	0.35	0.7	2.99828E-22
0.2	0.3	2.30668E-97	0.32	0.1	3.3886E-32	0.35	0.9	3.51345E-22
0.2	0.5	3.84447E-97	0.32	0.3	4.46255E-32	0.4	0.1	5.58215E-11
0.2	0.7	5.38226E-97	0.32	0.5	5.5365E-32	0.4	0.5	1.06755E-10
0.2	0.9	6.92005E-97	0.32	0.7	6.61045E-32	0.4	0.9	1.57688E-10
0.3	0.1	6.81111E-40	0.32	0.9	7.6844E-32	0.5	0.1	0.07774752
0.3	0.3	8.83614E-40	0.34	0.1	1.55545E-25	0.5	0.5	0.287837527
0.3	0.5	1.08612E-39	0.34	0.3	2.08542E-25	0.5	0.9	0.497927535
0.3	0.7	1.28862E-39	0.34	0.5	2.6154E-25	0.7	0.1	0.1
0.3	0.9	1.49112E-39	0.34	0.7	3.14538E-25	0.7	0.5	0.5
0.31	0.1	6.56321E-36	0.34	0.9	3.67535E-25	0.7	0.9	0.9
0.31	0.3	8.57595E-36	0.35	0.1	1.45276E-22	0.9	0.1	0.1
0.31	0.5	1.05887E-35	0.35	0.3	1.96793E-22	0.9	0.5	0.5
0.31	0.7	1.26014E-35	0.35	0.5	2.4831E-22	0.9	0.9	0.9

In this subsection, it was shown that there are equilibria with cooperation both in pure and mixed strategies in the case of the Mothers of Plaza de Mayo. This means that even when some of the mothers were allowed to have some probability of participating in group activities, there are plausible conditions (shown in the simulations) in which high risk is combined with participation for rational individuals. Hence, it was shown that the Mothers acted rationally in risking their lives for their cause.

4.3. Equilibria without state repression

In Section 4.2 the cost of participating (c) reflects the fact that the government always represses the group. What would happen if the government did not repress? A reduction of c enlarges the gains from participating and thus diminishes the incentives for free riding. As $c \rightarrow 0$, the expected payoff of participating becomes $\Pr\{M_p \geq \tau\}(1 + s)$ and the expected payoff of

not participating approaches $\Pr\{M_p \geq \tau\}$. Thus, a rational player will participate. This may explain why the group grew stronger with the end of the dictatorship.

However, the emergence of democracy changed the incentive scheme significantly. Once repression ended, information was readily available; both national and international bodies investigated abuses of human rights. In terms of our formal analysis, this implies that one of the components of the selective incentives (the information that the mothers secretly passed on one another at the Plaza (*d*)) became a non-excludable public good. The purposive (*p*) and solidary (*o*) benefits remained excludable goods.

Nevertheless, more mothers joined the group. In turn, increased membership was followed by the split of the group into two organizations. In 1983, democratically elected president Raul Alfonsín addressed the issue of the disappeared through: (1) the appointment of a commission of investigation (CONADEP), which produced the report *Nunca Mas* and (2) the trial of the Junta. By the end of 1986, the government enacted the Full Stop Law and in the beginning of 1987, the Due Obedience Law (Bouvard 1994: 158). Both were aimed at providing a statute of limitations on the military trials, probably a compromise between the government and the armed forces in order to prevent military insurgency.

The position to be adopted by the Mothers in face of these political developments was highly controversial within the group. In the beginning 1986, three years after the return of democracy to Argentina, a group of mothers separated from the original organization Asociación de Madres de Plaza de Mayo and founded Madres de Plaza de Mayo Línea Fundadora. According to those mothers conforming the new organization, the reasons for the split were threefold. First, Línea Fundadora supported a more moderate position in tone with a constitutional order. Second, they supported the exhumations and the scientific identification of human remnants, while the Asociación believed that that was a recognition of the death of the disappeared, which would weaken their demands in regard to the search and punishment of those responsible of the disappearances (Mellibovsky 1990: 191). Third, they did not perceive that a democratic spirit reigned in the leadership of the organization. According to the MFL: “The split of the movement occurred after having confronted together the worst years of dictatorship. It was motivated by serious differences in relation to a necessary change in the methodology of our fight under a constitutional government and due to deep discrepancies in face of the advancement of an increasing and unacceptable authoritarian attitude with marked personal tone, which impede a democratic conception of the cohabitation inside our organization and in relation to the other organizations of the human rights movement. The implementation of policies more and more dictatorial, disqualifying and defamatory led to the irremediable rupture.” (MLF web site, my translation)¹¹

The version of the mothers in the Asociación de Madres de Plaza de Mayo, from a compilation of testimonies that can be found in Diago (1998: 193), is that those mothers who left the group did so because of the fact that they perceived that they would not win the election within the organization. On January 17th of 1986, the group of mothers who later formed Línea Fundadora presented the “yellow” list for the internal elections of the Asociación de Madres de Plaza de Mayo, but while votes were cast, they decided to abandon the election claiming technical flaws in the process.¹²

We can reasonably interpret that the split was due to a mix of a power struggle and concrete differences in terms of what steps the organization ought to take in a democratic scenario.

¹¹ MLF web site, Document: “Respecto a la identidad de Madres de Plaza de Mayo Línea Fundadora”

¹² They argued that the Budget and the Memoir had not been presented exactly 15 days prior to the election.

Nevertheless, it is not relevant in this analysis what share of the explanation each of these factors accounted for. Although it is true that the split occurred under democracy because differences between the Mothers arose then, a break up was unlikely under the military regime. Differences between the mothers already existed when they started meeting (see testimonies in Diago 1988:191-196). For example, the positions towards the Catholic Church and personal political orientation marked differences between them even before the return to democracy, although the institution took no official position. These internal differences were not new. What was a novelty was that, with guaranteed constitutional rights, the cost of joining the group approached zero and there was no need to act cohesively in defensive activities.

5. Encapsulated-interest theory of trust

I argue that the kind of behavior described in the above paragraphs was exactly what made the Mothers rational. This falls into the definition of encapsulated trust, referring to mutual trust relations between each pair of mothers within the group, or at least the core group (the organizers able to mobilize and coordinate the rest).

According to Hardin, encapsulated interest is among the top reasons for considering someone to be trustworthy:

“Note that our merely having the same interests with respect to some matter does not meet the condition of trust as encapsulated interest, although it can often give me reason to expect you to do what I would want you to do or what would serve my interests (because it simultaneously serves yours). The encapsulated-interest account does entail that the truster and the trusted have compatible interest over at least some matters, but such incentive compatibility, while necessary, is not sufficient for that account, which further requires that the trusted values the continuation of the relationship with the truster and has compatible interests at least in part for this reason.” (Hardin 2004: 7, italics in the original).

Thus, trusting each other over their own physical security was both the core cost and the core benefit of joining the group, given that we know through testimonies that the intensity of the preference of those mothers interested in finding out about the whereabouts of their children was very strong. That was the safety net that made any joint action possible, as the actions of the mothers described above show. When everybody was calling them madwomen, they were in fact maximizing their utility under high risk conditions and being more effective in voicing their demands.

Now consider the situation of the Mothers towards the times in which the first “disappearances” took place. At the beginning of the process, the mothers (according to their own testimonies) were naively hoping to capture General Videla’s attention and eventually receive favourable answers from him (see Section 2). They obviously did not have information on what type of dictator he was and how willing he was to kill civilians. This lack of information facilitated the first gatherings between the mothers. Given the information available to them, they rated a lower risk than the one that they were really facing and rationally decided to organize. I would say that they made a rational choice with incorrect beliefs. The risk was also affected by the fact that at the beginning the Mothers were not completely aware of the fact that the whole regime was behind the “disappearances” and that those “disappeared” were actually killed. They went through a learning process: how to be secretive about future places to meet, how to avoid police repression, etc.

Note that the type of interaction proposed involved trusting people known to you. Let us remember that the mothers did not exchange any information on their last names, addresses or

phone numbers at the beginnings (later on we could think of a repeated game structure). This consideration introduces a second type of risk: that of including in the set of trust relations the wrong people. Again, the government would be behind this, but now in a different manner: spies could be sent to infiltrate in the group. Indeed, failing to gather hints about the true type of new members led to the “disappearance” of Azucena on Dec. 10th 1977. From then on, the mothers started to be very careful as to who was accepted in the group.

On the side of the benefits, we counted the possibility of having a forum in which to talk and feel understood (developed in Section 1), a safety net to protect each other’s lives (referred to in the last paragraph), the possibility of finding a more effective way to gather information on the “disappeared” than doing it alone, a social network of information for various purposes, the satisfaction of doing something for their children, and the feeling of belonging to a group of “equals” in respect to the situation they were living. We should make a note at this point. We have shown through the mother’s testimonies that one of the main reasons that drove them to participate in the activities of the group was the fact that they had a shared concern for their missing children. Nevertheless, we are aware that this fact does not meet the condition of trust as encapsulated interest (Hardin 2002: 4). This makes our argument even stronger, because as this is not required in the definition of trust under analysis, the reason we consider determinant of trust relations of this type can be isolated: the risk of being killed or harmed, “I protect my life when I protect our life.” Note that this case is notoriously different from other situations in which you assess another member of your community as trustworthy because you are certain that you will repeatedly encounter her in future interactions. You are able to anticipate that it is in her interest to act in your interest in the interactions you both have because if she deceives you, she is likely to be excluded from the group and therefore lose the benefits of membership (e. g. mafia groups, religious sects, etc.)

We have so far analyzed the costs and benefits involved in joining the group, provided that it is organized and trust relations are such that collective action is supported, and more importantly, provided that the probability of going missing was in fact a decreasing function of trust relations (the stronger the trust relation, the more controlled the risk), we are left with the task of showing the rationality of the 14 first mothers. An easy way to account for it would be to state that their passion overturned their rationality, and it turned out all right in the end. This is, nevertheless, not a satisfactory answer in terms of our theoretical framework, but more importantly, we would not be explaining rationality. The best way to explain their rationality is to analyze the problem they faced in light of the concept of common sense epistemology “[...] When we face a decision, we are stuck to a variably large extent with the prior knowledge. We may act rationally from the perspective of our available knowledge even though, with more time to work out the facts, we might retrospectively conclude that our action was not in our interest. It would be odd, however, to conclude that the action was irrational when taken if it was fully rational given the available information” (Hardin 1995: 16).

6. Conclusions

We explored the circumstances under which trust relations emerged in the case of the Mothers of Plaza de Mayo and found two important moments: (1) when the group was spontaneously created, where uncertainty led to an underestimation of risk and (2) when the risk was high but the group was already up and running, and new members faced the decision of whether to join or not. This case offers very special conditions since the cost of joining group activities was extremely high, endangering the physical well-being of participants in collective

action. The mothers organized and were able to survive the dictatorship, making individual rational choices consistent with collective objectives.

A very simple step public goods model was developed in the preceding pages. The results of such exercise showed that cooperation was supported in equilibrium in the stage game both in pure and in mixed strategies. These results were unchanged when analyzing the effect of a reduction of the cost of participation. We found that even when the incentive scheme changed, it did not alter the predictions of the model. The results helped us support formally the outcome observed: the problem of the free-rider was overcome due to selective incentives. Additionally, the evidence showed that selective incentives came before the group was well functioning, since the first mothers who gathered at the Plaza benefitted from each other's moral support.

We investigated the split of the organization with the democratic transition and made a counterfactual argument in order to explore the effect of a drastic decrease of risk on trust relations. We posed that such impact led to a situation in which each other's life ceases to be the object of trust and allowed the revelation of more sophisticated preferences relative to those found under higher levels of risk (where the only thing that mattered was to preserve your life).

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