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The Effects of Socio-Demographic Changes on Cooperation and the Implications for Current Psychosocial Crises: Higher Suicide Frequency and Coronavirus Pandemic

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ABSTRACT

Two major recent socio-psychological crises, the current Coronavirus pandemic and the high suicide rate among Latino youth, have triggered world leaders to call on cooperation as a part of their solution. Cooperation, in this respect, is defined as coordinated action directed toward the attainment of a mutual benefit. Building on the tenet that social processes influence, if not determine, the psychological ones, we examined and reflected on recent social and psychological sciences contributions to the understanding of cooperation. While anthropologists and sociologists looked more at cooperation as a practice, psychologists examined overall the process itself in relation to other basic psychological processes. A new perspective emerged in cross cultural psychology when the Laboratory of Social Interaction (LIS) enlightened by Greenfield's theory, empirically reported the decline in cooperation as result of socio demographic changes in Mexico, a trend that found support in more than 25 subsequent studies. It is in light of this review and a current call for cooperation to alleviate the aforementioned crises that the authors arrived at the conclusion that in order to respond to this call, there is a need to promote the forgotten value of social solidarity that is indispensable for the survival of contemporary societies.

Keywords

Social Crisis, Cooperation, Coronavirus.

Introduction

The following reflections are based on the central theoretical statement that psychological processes are influenced, if not determined, by social processes. The aim of this paper is to contribute to the understanding of two major current social crises: the socio-psychological implications of the Coronavirus pandemic and the high frequency of suicide among Latino youths. Looking at the world leaders' appeals for cooperation as a way to find a solution to these crises, we examined the potential contributions of the social and psychological sciences. In a nutshell, this review of sociology, anthropology and psychology showed a decline in the value of cooperation across different societies.

In the following sections, the major theoretical tenets of interdependence are presented with special attention to sociological, anthropological and psychological contributions to the understanding of cooperation as one of the possible outcomes. A second section benefits from the major works of the Laboratory of Social Interaction (LIS) and Greenfield's theory on socio-demographic changes. This part depicts the profound decline in cooperation and the consequent rise of individualism from the perspective of overall socio-demographic transformations. A third section briefly examines two current social crises: suicide and the Coronavirus pandemic whose main solution rests on cooperation, according to some experts. A final section summarizes our reflections. It proposes that cooperation in both suicide prevention and physical distance (projected as a means to avoid contagion from the Coronavirus) rest on the awareness of interdependence and the dependence on the interpretations of the interacting partners involved in the social processes.

General Theoretical Contributions relevant to the Understanding of Cooperation

As starting point, in an exhaustive review on cooperation research,

Warneken [1] indicated that this process involves coordination and distribution of outcomes and that chimpanzees and children at age two show the abilities and commonalities for the first one, and that the abilities for the second depend on social and cultural ecologies. This tenet seems consistent throughout the social sciences. Sociologically, the major concern has been the interdependence of different elements of the social structure. Durkheim [2] was the first scholar interested in responding to a social crisis of his time by stressing the importance of solidarity. He expected that with industrialization, society would change from mechanical to organic solidarity. He predicted that individuals' needs would increase their cooperation, due to interdependence derived from the division of labor. Thus, he was mainly concerned with the foundations of solidarity, social norms and deviance. He was also the first to attempt a study of suicide from a sociological perspective [3].

On their part, anthropological studies of cooperation emerged as early as 1937 focusing on the practices more than the processes of cooperation. Anthropologists such as Mead classified societies on a binary scale, depending on their cooperative or competitive nature. Within this research tradition, Lewis [4] and Romney & Romney [5] based on their fieldwork report the outstanding cooperative behavior that rural Mexicans demonstrated.

From the psychological perspective, cooperation has been studied in relation to processes such as learning, motivation, emotion and personality. This focus on individuals as being motivated, gain-conscious and directed by their own psychological processes is improved by a tendency to look at dyadic interaction as more profitable. In other words, following the previous trend of looking at individuals, the analysis of dyadic interactions as resulting from one's own actions, attributions and interpretations and others' actions and interpretations seemed more profitable for explaining cooperation [6-8]. This view of cooperation is modified in most studies published after Kelley's prior propositions. In these scientific contributions, the paradigm is outlined as follows: I = F (S, A, B). In this paradigm, "I" stands for interaction; "F" represents a function of, "S" the situation, while "A" and "B" denote the interacting individuals.

The highlights of this research depict the importance of the structure of interdependence, as well as that of the particular personalities or social orientations of interacting individuals. In contrast with the classical psychology of their time, the above views argue that behavior does not only result from the objective situations or instructions that individuals may receive. Rather, they also spring from their personality and culture. Asking someone to cooperate does not in and of itself lead to cooperative behavior (as it may be assumed in current social media). On the contrary, cooperation depends on the particular attributions or interpretations that the interacting individuals associate with a given situation and the intentions attributed to the source. However, those attributions and interpretations in the interactions result from the individual's culture. Each culture may promote, through socialization, a distinct social orientation.

In simple terms, initially cross-cultural psychologists took the challenge to identify the factors associated with cooperation as a social and psychological process linked to socialization practices. Also, psychologists, from the 1960s to the end of the century, retaking the anthropological findings as hypothetical tenets retested them with experimental rigor and measurement. Anthropologists [4,5] based on participant observation pointed out the high frequency of cooperation among Mexican rural children. Madsen [9] tested those propositions and carried out a series of experiments. He and his associates in the 1970s and 1980s [10,11], reconfirmed the high cooperation levels reported by anthropologists among Mexican rural children. They also established a correlation between this high level of cooperation with socialization practices and particular cultures. Along this line, they demonstrated that Mexicans, Mexican Americans, Afro and Euro Americans differed in their patterns of cooperation. These patterns ranged from higher to lower levels respectively.

Furthermore, while the original results of cultural and rural-urban differences were initially attributed to family socialization, as an expansion of these findings, they tested the effects of schooling, age, sex and ethnicity in US cities and later in other countries such as New Guinea and Israel. In all of those societies, the rural-urban differences were consistent. Cooperation was explained based on the socialization that each particular culture promoted. And better still, beyond that valuable contribution, a major dimension in the understanding of cooperation occurred when cross-cultural anthropologists documented empirically that societies are in constant sociodemographic change.

At the turn of this century, new empirical results derived from a series of studies which compared socio-demographic changes and their effects in Northern and Central Mexico. This led them to the conclusion that societies undergo transformation from cooperation to competition as will be shown in the following section. A new perspective emerged when García et al., at the Laboratory of Social Interaction (LIS), enhanced Madsen's contributions by showing the importance of social change. Using the same experimental procedures and in the same geographical regions, the effects of social change were observed in all the replications of Madsen's work in Mexico [12,13], as well as Romney & Romney's [5] in Juxtlahuaca [12]. More specifically, the new findings showed changes of values and socialization; and thus, change in social relationships (especially within the framework of cooperation). This is illustrated in the following discussions.

Review of Findings from the Laboratory of Social Interaction Enlightened by Greenfield's Theory
In 2004, García et al. started a long-term project aimed at the study of social change and its impact on social interaction. Using Madsen's tools, tasks and designs, García et al. [13,14] examined the impact of socio-demographic changes on cooperation, providing empirical data nearly 50 and 30 years apart in the same regions previously studied by Madsen. Briefly stated, Greenfield's theory [15] suggests that socio-demographic changes lead to cultural change which, in turn, affect socialization practices. This theory

is based on a distinction between communities (Gemeinschaft) and societies (Gesellschaft). Accordingly, cooperation, which in Gemeinschaft ecologies was functional tends to decrease, while competition increases with sociodemographic changes. This is depicted by two sets of studies carried out by the Laboratory of Social Interaction (LIS). In the first [13], children faced a cooperative task, the Madsen marble pull [10]. In these studies, the task and procedures consisted of children pulling a string attached to a marble container coordinating their moves in order to obtain a marble. If both children pulled the container simultaneously, the marble was lost; if both coordinated their moves, the child who pulled the string obtained the marble. The children tried ten times as shown in Figure 1. The difference in results between Madsen's and García's were interpreted in the light of Greenfield's theory as reflecting the current demographic changes.
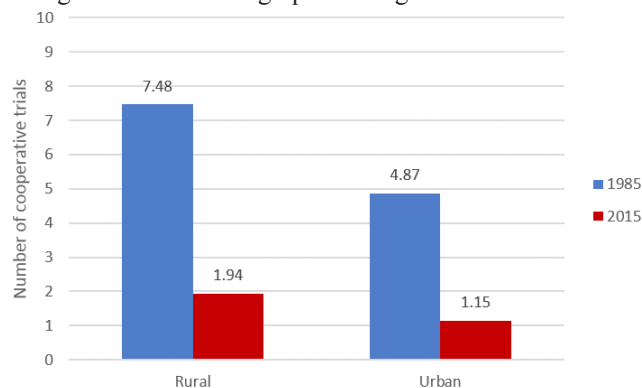
Figure 1: Cooperative behavior in rural and urban areas of Mexico in 1985 and 2015.
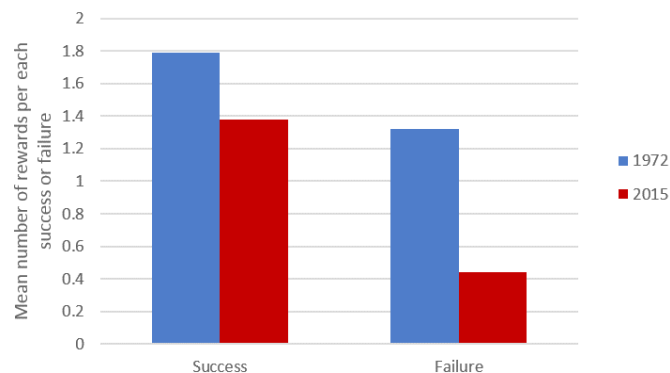**Source:** García, Rivera & Greenfield [13].

These experiments were followed by a second set which used the same instruments and experimental tasks and procedures as in Madsen [10] but this time, a larger sample of different communities showed a consistent decrease in cooperation as in the previous experiments (Figure 2). As in Madsen's original study, children's behavior was attributed to socialization. The differences in cooperation levels between Madsen's original results and García's 43 years apart were attributed to the sociodemographic changes as detailed in the original paper.
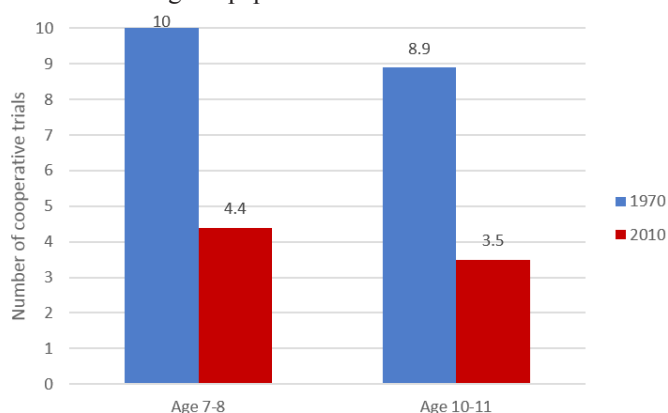
Figure 2: Cooperative behavior in Mexican Children in 1970 and 2010.
Source: García, Rivera & Greenfield [13].

A second set of studies focused directly on new trends of socialization as a result of sociodemographic changes. In these experiments, rural and urban mothers teach their children by placing demands on them as a result of success and failure. The materials and procedure were exactly a replica of those described in Madsen and Kagan [11]. Figure 3 presents the mean number of marbles given by mothers in response to children's success or failure both in 1972 and 2015.

Figure 3: Mexican mothers socializing their children 43 years apart.
Source: García, Greenfield, Montiel, et al. [14].

Following the 2015 and 2017 LIS publications [13,14] on the effects of recent major socio-demographic changes, several studies have either strengthened or qualified the statements on the decline in cooperation and the increase of individualism and competition not only in Mexico but throughout the world as the following studies portrayed.

Reactions to LIS contributions

Studies published after the classical contributions of LIS to the central issue of cooperation, overall, oscillate between the processes of continuity and change as the following studies will show. This continuity of cooperation was reported by Rogoff [16]. In explaining how the children become "acomedido" (helpful, socially mindful) she described the process as a special "way of organizing learning opportunities. In this organization, children are broadly integrated into the activities of their families and communities. They learn by actively contributing to the endeavors around them, in a multifaceted process termed 'Learning by Observing and Pitching In'". Essentially, this corresponds to a form of learning how to be cooperative. Accordingly, this particular form of learning shows how pro-social development prevalent in the USA, Mexico and Central America occurs, without the enforcement common to Western societies.

But the continuity of cooperation faces limitations in the light of socio-demographic changes including schooling. Little and Lancy [17], referring to conflicting psychological and anthropological reports, found that while parents promote pro-social development, Western schooling promotes competition. They commented "Such broad, global transitions [13], and how they are articulated in diverse cultural settings". Rogoff et al. [18], while acknowledging

changes and adaptations, stress the need for not seeing this as a deficiency but rather as a strength. Citing García et al. [13] on the decline of cooperation, they state that "some of the more traditional Indigenous American practices are attenuated or lost, while others are sustained".

García et al. not only examined change in cultural values, but also looked at socialization as strengthened by Greenfield's [15] theory of socio-demographic changes and their effects on human development. More, they had an even wider impact by examining these original experiments, not as simple replicability, but as potential new contributions to the development of the study of social change. Greenfield [19] wrote: "Our most recent publication on the effects of decades of social change ended with a challenge to the notion of replication as a standard for psychological science [13]".

Lastly, note that in the previous studies, continuity was more emphasized than change. This is in line with Alcalá, Rogoff & López [20] who show the persistence of higher collaboration among Mexican heritage than European American pairs of siblings. Finding support in studies by García et al., Alcalá et al. [20] wrote that: "A growing body of research indicates that collaboration often occurs to a greater extent among children with Indigenous backgrounds in Guatemala, Mexico and the United States than among children from families in those same countries with extensive Western schooling and related middle-class practices, who often compete or show a lack of connection".

In opposition to the emphasis on continuity of cooperation, change is overall highlighted in current analysis. Moreover, using different samples and methods, contemporary researchers report a consistent change from cooperation to competition as originally observed by Garcia et al. in Mexico. Furthermore, a tendency towards the generalized validity of this major trend is claimed by Gurven [21]. He reported that "contrasts between small-scale, kin-based rural subsistence societies and large-scale urban, market-based populations, have not been well appreciated [such] that these phenomena should be a fundamental concern of the social sciences". This view is enforced throughout the current literature focusing more on the general trend of social change, as follows.

Greenfield [22,23] outlined a theoretical framework and methodological guidelines for the study of social change, culture and human development. Also, in her analysis, she describes the effect of communication technologies in support of the trend towards individualism. Similar claims are reported by Cai et al. in the Oxford Handbook of Culture and Psychology in their chapter on Living in a Changing World [24]. To correlate these findings, as well as those of García et al. [13,14], Santos et al. [25] stated that:

"Additionally, time-lagged analysis showed that over 150 years, these socio-economic changes preceded shifts in individualism, which suggests a causal relationship between these variables. These patterns are not limited to the United States. Researchers have observed similar patterns in […] Mexico [13]; in each country

economic development accompanied changes in individualistic practices (e.g., learning with less input from teachers), family structure (e.g., living alone), and values (e.g., emphasizing independence for children). Similarly, our recent work examining national survey and census data across seventy-eight countries found that increases in income, education, occupational prestige, and urbanization in the last sixty years accompanies increases in individualistic family structures and values".

While the overall contribution of social sciences in general and cross-cultural psychology in particular on the increasing individualism in contemporary societies gains more validity, the request for cooperation showed the contradiction inherent to contemporary societies. The rise of suicide as a social and psychological problem and the world leaders' response to the call for cooperative action against the Coronavirus pandemic attest to their validity. This is in line with Lewin's assertion that the best test for a theory is a real-life situation. Thus, we selected the following two cases that stress the need for cooperation. While the first preceded the second, it might be that the Coronavirus pandemic and its differential impact across social classes and ethnic groups might increase the suicide rate as some reports suggest.

Increase of Suicide and Attempts to Diminish it: A call for cooperation

The increase in suicide rates in the last years, not only in the USA, but also throughout the world and particularly in Mexico was reported by different sources [26-33]. The White Non-Hispanics group showed the highest rates in the last years, contrarily to the foreign-born Hispanics and the White Hispanics [26-28]. The Hispanic ethnic identity (which includes religiosity and "familism") may attenuate feelings of alienation, isolation and community disorganization. However, acculturative stress is an important risk factor of "suicidality" for this population [29]. For example, the suicide behavior rate in Hispanics is higher for those who have immigrated than it is for those who have not. And yet, the Hispanics´ suicide rate remains lower than that of the White US-born. This may be related to cultural differences, resilience levels and most especially, to earlier family cooperative values. This can be observed in the figure below.
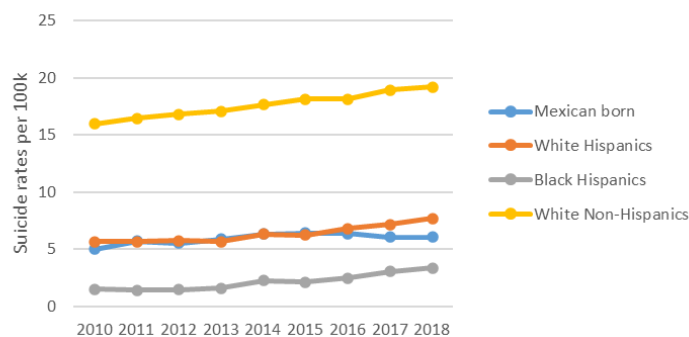
Figure 4: Suicide rates in Mexico and the U.S. by race, 2010-2018.
Note: Elaborated from the Centers for Disease Control and Prevention [27] and Instituto Nacional de Estadística y Geografía [30].

Yet, the suicide crisis is not limited to the USA. In developing countries (such as Mexico), the increase in suicide rates is shown in the last two decades, especially for young populations [31]. This increase is so striking that the Mexican National Agency for Statistics notes that the suicide rate is the second cause of death for 15-30 years old people [30].

According to the National Health Agency in Mexico [32], the suicide rate among Mexican young people has almost tripled from 1990 to 2013. Explanations of this crisis vary. Some studies reported socio-emotional factors linked to age, sex, living with non-parent relatives and traumatic life-events experienced during childhood [33]. While explanations differ, the strategies to reduce the problem coincide with the call for cooperation as follows.

The World Health Organization [34] proposed a schematic model that includes the cooperation of four different agencies like health systems, society, community and relationships in three fields of action (universal, selective and indicated). Attending to this model, the strategies can create mental health policies, regulate self-injury promotion in social media, improve professional training to attend to crisis help lines and promote social networks and community supports.

Attempts to deal with this crisis, clearly suggests a change of values. One suicide prevention model for Hispanics can be explained by Silva et al. [29]. In their model, having greater acculturative stress leads to decreased engagement in culturally-valued social activities. As a result of this lack of engagement, Hispanics experience a decrease in the feeling of belonging and an increase in suicide ideation. Therefore, an effective program for this population in the U.S.A needs to increase culturally-valued social engagement to reduce suicide risk.

All these reflections suggest that a well-intended plan to reduce suicide or at least to stop this accelerated trend might benefit from considering social change and long-term effects on the desired cooperative behavior. Even more, once the cooperative orientations are discouraged through the media which are strengthened by current technology [23], the possibilities for social support are either null or limited.

Efforts to Control the Coronavirus: Social or Physical Distance?

In several internet sources the call for cooperation was omnipresent. Some sites claim that for the first time on March 23, the UN General Assembly called for "international cooperation" and "multilateralism" in the fight against COVID-19. Furthermore, this claim openly states that "This is a time for science and solidarity" [35].

Without denying the value of experts' knowledge on the importance of physical distance to avoid contagion, maybe the meaning was not what "social distance" meant. As recently as April 7, 2020, Aldrich published in his page a call to distinguish: "Cultivating social ties in the age of physical distancing" [36].

"There is growing evidence that our bonding, bridging, and linking social ties impact our lives, resilience, and exposure tremendously. Bonding ties connect people who are quite similar in terms of religion, ethnicity, race, and other characteristics. Bridging ties bring people of different types together through an institution like a workplace, school, or club. Finally, where social ties are horizontal, linking social ties connect us to people in power and authority. We're not paying enough attention to these ties as we settle in for a long battle with COVID-19" [36].

Furthermore, while the above statements attest to the need for cooperation, the world response was not positive. The call of the United Nations and religious leaders to stop the current wars in the world did not find strong support. Even the call of a religious leader to abolish the international debt of poor countries affected by the pandemic did not find an echo throughout the world, except, in France [37].

To summarize, there are consistent trends in social and psychological sciences that support the original findings documented in Mexico by García et al. among others. Furthermore, although still reflected in the continuity of the prosocial values and behavior, the dominant trend, as predicted by Greenfield, is the transition from cooperation to competition. It is in this context that the urgent call at these moments by world social leaders in light of the pandemic and a high rate of suicide may not find strong echo as expected. While the world's transformation towards capitalism led to the accumulation of wealth in fewer hands in the light of the promotion of individualism, it is this contrasting world that may benefit from the findings of social scientists on cooperation. Several points presented in this short essay might be useful for those searching for a solution to the current human crises:

While interdependence is a central feature of social life, this may result in a variety of human processes such as competition, coercion and altruism, among others [38]. Cooperation remains as the only process indispensable for human survival. And again, cooperation is a culturally bound phenomenon that develops as any other feature of social development. This implies that just like competition was promoted to lead to high need of achievement, so cooperation needs to be promoted if society is to survive. As Moore [39] proposed, a time has been reached in which social analysis looks at some processes in competition with other processes. Currently, the media is controlling the information assuming that the message itself determines behavior, whereof, a constant call for cooperation is stressed. Following the pioneering efforts of Hovland, Janis and Kelley's project [40], for a message to be effective it is necessary to analyze: Who communicates what to whom? To expect cooperation from a heterogeneous societal context, the communicator may consider the attribution that the receiver makes of him/her as well as the other variables cited throughout these reflections.

In conclusion, in light of today's crises and calls for cooperation, our aim was to review the current contributions of social and psychological sciences. Our findings showed that overall

cooperation has been investigated as a practice and as a process. Social scientists demonstrated that although indispensable for human survival in the past some societies encouraged it while others did not. Psychologists on the other hand, showed that this process interacts with other processes such as motivation, learning, information processes, and development. Recently, cross-cultural psychologists examining the practice and processes involved have shown that cooperation currently is consistently dying out due to socio-demographic changes which have effects on culture, socialization, and human development as a whole. Thus, although cooperation is upheld and recommended as the miracle-solution to high suicide rates and Coronavirus suffering, social change proves the need to consider all these contributions if any social intervention is to succeed. Particularly, these findings stress the fact that social research is indispensable to have effective messages promoting cooperation. Lastly, today's social scientists' contributions to the understanding of the decline of cooperation and its critical relevance for the world crises place also a call on the scientific community itself so as to rethink the past tenet of the survival of the fittest through competition. Current crises show the need to reevaluate cooperation, as the legacy of past societies and as the only way for the survival of current society as a whole.

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