



**Universitat**  
de les Illes Balears

**Título:** *Dissidence: evolutionary considerations*

**AUTOR:** *BRUNO PIRES*

**Memoria del Trabajo de Fin de Máster**

Máster Universitario en *COGNICIÓN Y EVOLUCIÓN HUMANA*

de la

UNIVERSITAT DE LES ILLES BALEARS

Curso Académico 2018-2019

Fecha \_\_\_\_\_

Nombre Tutor del Trabajo : *Antoni Gomila Benejam*



# Dissidence: evolutionary considerations

## Abstract

Dissidence occurs when an individual opposes and resists in some way an established social order. The opposition can address any kind of social values: political, religious, artistic. Societies may tolerate or repress dissidence. In this work, I want to raise the question of whether dissidence makes any evolutionary sense. In many animal social groups, it happens that individuals can be ostracized, and this practice may turn out to be adaptive for the species as it can be seen as a mechanism of diversification, which may become functional as a way to respond to environmental changes. In what follows, I will consider several reasons why it might be evolutionary and adaptive for humans that some individuals fail to conform to the group standards, focusing particularly on the benefits of social innovation.

# Dissidence: evolutionary considerations

## Introduction

While I observed a male black lemur (*Eulemur macaco*) sitting alone at a distance from the group, it occurred to me that if the group had been monitoring the loner, as it usually does to an outside threat, the group could benefit from the extension very much like some species do with a sentinel. On the other side, the loner could benefit from observing the dynamics of the group and perhaps bring some corrections. It was not only that what he seemed to be happening. Even to the untrained eye it had been clear he was trying to rest far enough from the boisterous group in between any strange event that prompted him alert. I did not know what happened before, if he had been forced into that situation or chose to do so. The idea that he had had enough of the group was an induction, probably an anthropomorphizing one, which to me echoed the course of a dissident. Perhaps not surprisingly the origin of the word precisely comes from the combination of dis- 'apart', + sedere 'sit': to sit apart.

The idea of dissidence is usually equated to an intellectual affair with socio-political motivations. It is described as a deliberate opposition to the normative codes and rules of a group. Most of the interest in dissidence focus the discussion as an ontological problem. This essay attempts to place the phenomena within an evolutionary perspective. Because there aren't empirical studies to be found that evaluate dissidence under evolutionary terms, we must survey the social perimeter for evidence that may conduce to dissidence. We can identify similar phenomena in forms of ostracism in other species, for example. In this paper, I will propose that dissidence makes evolutionary sense as a form of social innovation that promotes social change. In this way, it contributes to improve opportunities for adaptation to change. In order to develop this argument, I will introduce first the notion of alienation. Dissidence can be viewed as a reaction against the experience of alienation.

As a result of restrictions in complex societies, social isolation and alienation have been noted for negative correlation with the individual's

executive functions. In the next section I'll introduce this notion of alienation, as a way to motivate the urge some individuals experience to confront the society they belong. I propose dissidence makes evolutionary sense from the point of view of group selection mechanisms that have been relevant in the evolution of altruism. The individual's intellectual exercise compensates social deprivation. For those reasons, I find it is important to start by discussing and review concepts of alienation and social isolation as possible preliminary chambers (or subsets) of the phenomena.

## Alienation

Alienation is the problematic separation and estrangement of the self from what naturally belongs to. We may trace the concept of alienation in Plato's philosophy. He holds that the "Ideas" exist independently of mind in a world of their own (Iqbal Shah, 2015). It follows thus that ideas are contrary to the real world, which having a vehicle in complex languages further distances one from the other. No doubt culture modifies and can even drive natural selection, as in the case of lactose tolerance. However, Plato's view offers no better solution than an extreme version of Rousseau's *bon sauvage*, taking culture out of the evolutive equation. In this sense there are limits to what can usefully be done without getting rid of culture altogether. We would have to stop here, but certainly a lot more happened in between.

The Judeo-Christian idea of alienation pervades Western cultures. The lament about being "alienated from God" (or having "fallen from Grace") translate to the sentiment of disgrace present in so many cultures, which can be taken as a sign of divine alienation. Religious practices are presented as the redemption and antidote for alienation. In fact, its meaning comes from the Latin *re-ligare* which means to reconnect. The inception remounts to the mythological founders of Adam and Eve, the original sin and the alienation of humans from paradise. Knowing that Plato's philosophy had been adopted in

many instances of convenience, it should not come as a surprise that in practical terms, the Judeo- Christian solution is no more satisfactory than his.

Drawing from Hegel's theory of alienation, Marx addresses the phenomena as a psychosocial ill that results from directives of modern societies. This rationale is thus closer to the problematics of dissidence. He goes on to identify four types of alienation: **Objectification** as alienation of or from things of production. **Self-Alienation** as alienation from one's own activity. **Species Alienation** as the estrangement from the human species or essential nature. And **Alienation from other people**.

The importance of Marx's theory beyond social comment was proposed by a school of thought known as Marxist Humanism and thinkers such as Erich Fromm that preferred to use his early writings as a way of probing how capitalism distorts the nature of human relations (Jay, 2018).

For the most part, researchers have provided a negative relation between alienation and important outcomes including citizenship behaviours, task performance, absenteeism and a positive relationship with health problems (Chiaburu et al, 2013). Having this in mind it is only plausible to assume the hypothesis that dissidence is a coping mechanism for the ills of alienation.

### From Alienation to Dissidence

There are two sides in this explanation for dissidence, one refers to the individual's perspective and the other the group's perspective. We have just seen that social theories of alienation can partly describe the process in explaining social isolation. Social pain, which comes with it, indicates the weakening of ones' connections to the group. John T. Cacioppo and Louise C. Hawkley suggest that when people feel socially isolated they become more likely to use their cognitive capacities to try to fill the social void (Cacioppo & Hawkley, 2009). The failure to repair such situation (and the feeling of alienation from within the group decisions) may thus be counted to conduce to dissidence. One of the explanations for this to happen is that which is known by

**endowment effect.** This concept has been introduced in behavioural economics to explain a pattern that occurs when we overvalue something merely because we own them (Kahneman et al, 1991). However, more than the loss aversion and beyond economic reasons, the default bias is here justified as a heuristic consequent of our **own** struggles for survival; we tend to value our struggles more than the others, our sons as better than the others, our skills as more needed than the others and so forth. When this fails to happen, it more often than not leads to a social disadvantage and ills such as depression and anxiety. It is widely accepted that humans need a degree of self-deceit to function in modern societies, to avoid cognitive load. Considering the benefits and the natural tendency for humans to procure social contact, to consistently elaborate in the ownership of ones' own status when isolated, implies the rehearsal of negative aspects in the group. This reverse in the rejection of the group is not seen in other social species. In primate societies, for example, it has been observed that bonds prevail over rejection (Goodall, 1984). It would be expected that in humans the processing self-related information, which is associated with the medial prefrontal cortex, is involved in distinguishing a construction of a dissident narrative in contexts where eusocial species experience rejection.

Social rejection and physical pain are similar not only in that they are both distressing, they share a common representation in somatosensory brain systems as well (Kross et al, 2011), (Eisenberger et al, 2003). This provides additional support in explaining the endowment effect, in that rationalization occurs when enduring social isolation, something that does not happen with other species, where the individual nurtures a rightful feeling of ownership which in turn may lead to dissidence. Hence, the endowment effect engages the individual in an intellectual exercise that ultimately attributes the agency of alienation and social isolation to the state of the group in opposition to his/her own ideas. Unlike other species, we need not only to secure our physical survival, of our kin and the group, but also that of our ideas, of our individuality; we need to pursue survival as the rational being we aspire to be.

It should be correct then to assume that the mechanisms in inhibitions that differentiate our reaction to social pain, from that of other species, assist the subsequent construction of the dissident phenotype. Although, there should be reserves in estimating how such inhibitions reflect hostile behaviors. As it was referred above, social isolation has not been observed to be endured in other social species. An experiment where monkeys were forced into social isolation, showed that 12 months of isolation almost obliterated the animals socially, showing almost no positive social behavior and no aggression, and being highly fearful of the others (Harlow & Dodsworth, 1965). In another experiment, human participants that were induced feelings of a future social isolation, when tested in their cognitive capacities, attempted fewer problems and were more aggressive towards others (Cacioppo & Hawley, 2009). There are similarities in the outcome of both experiments that could be related to absenteeism. But where the monkeys show fear, humans' aggressiveness towards others can confirm an availability to endure negative social stimuli as it is indicated by the intellectual exercise in endowment effect. This also introduces a sense of agency that begs the correction in that is not continued social isolation in other species we should be looking for, but its enforcement. It must then be reinstated that is the continued enforcement of social isolation which is not observed in other species and that this enforcement describes in fact what we may know as marginalization.

### Group Selection and Phenotypic Trait for Dissidence

The phenotype of dissidence can result from individual determination or/and situation-dependent factors. In both cases is essential a sense of the community one is opposing. This means that the individual must have an objective idea of the group as a whole, experience constraint, feel detachment from the whole - which in turn causes a rupture - and access other possibilities for the current **state** of the group. One important aspect to retain in dissidence is that in allocating attentional resources in other possibilities the individual never ceases to access them in opposition to the group. This is the ontological



aspect of dissidence and these premises should also account for individual determination. On the other side, situation-dependent factors depend on group selection which suggests i) the group perceives the individual as a different organism, ii) that both are part of the same organism, but part is rejected, iii) the division is circumstantial and temporary.

Humans and animals subject to bilateral amygdala destruction avoid all contact with others, preferring to sit alone in isolation, and will withdraw if approached (R. Joseph, 2015). Such behavior when observed should not, per se, account for dissidence. However, physical and psychological eccentricities can alone be causes for social exclusion. There are, for example, alleles that show a stronger attentional bias for negative words and pictures (Chiao & Blizinsky, 2009). The deliberation of a position against the social norms is not necessarily seen independent of a physical or psychological deviation. It might have an ideological consummation that does not necessarily and immediately reveal motivations and the mechanisms underlying it. How then genetic differences, pathologies, lesions or even plain economic status would classify as such? Social controls on group members are central to group evolutionary strategies (Macdonald, 2014). Difference, for instance, may be perceived a step away from attempts of segregation. Deleuze asserts that difference can be monstrous. A one-legged man or an extra pair of heads would certainly be noticed and cause stir. But differences need not be that conspicuous to us to feel the abyss of monstrosity. Wendy Holland, for example, explores the politics of Australian Aboriginal identity through the life of her great grandfather which became a commodity to the circus as an "exotic other" (Holland, 1999). This indicates the possibility of a negative correlation between motivation and the root of some cases of dissidence. Would Wendy's great grandfather have reasons to go against the normative of society? We have seen that social pain is like physical pain in that it shares common representations in the brain, it is only predictable that rejection elicits painful emotions and consequent reactions. Sense of injustice may certainly drive to dissidence.

From a strictly observational standpoint, there are behaviors in non-human primates in some forms of ostracism, shunning and rejecting individuals,

that could be equated to the process of dissidence. However, it must be reminded that they lack the radical and systematic intentionality characteristic of dissidence. Also, non-human primates do not have the social coordination humans have, which is determined by collaboration, showing (the mere showing of an object or situation) and joint attention. It could be argued that the institutionalized forms of extending and enforcing codes have far surpassed our capabilities to oblige to them.

Consequently, the unaware transgression of the norms in a society, can often mistakenly be associated with motivational reasons and a planned line of action that threaten the group. In this case, and if it does not provide access to what in common parlance is designed by creature comforts, society is reduced to that which is negatively experienced, and the rehearsal of its negative aspects justified. Furthermore, persisting suspicion leads to social isolation with consequences that might deploy disastrous events. In London, the paranoia experienced in the aftermath of the 2005 terrorist bombings led to the assassination of Jean Carlos Menezes, an innocent man, in circumstances that describe the routine of millions of innocent people.

### Are there benefits to dissidence?

To discuss group selection and the phenotypic traits of dissidence one needs some elucidation as to why it may or may not enhance the chances of survival of the individual and the group. Group selection can affect many traits which are good for the group but harmful for the individual (Wade, 2001). Mediated by the endowment effect, persistent social isolation is a self-oriented description of the phenomena that does not seem by itself to explain an increase in the chances of survival of the individual. On the opposite, it takes a course where society has to bend to the individuals' proposition(s). The explanation, supported by altruism models, is that the endowment effect in a situation of enclave restriction may initiate motility responses.

Theories of altruism explain situations where a behaviour is detrimental for the individual but favours the group. Factors that combined contribute for the occurrence of altruism (Trivers, 1974) and dissidence are those of dispersal rate and dominance hierarchy. We have seen that a fit notion in dissidence is that of **state**, which accesses first the particular condition the group is found in but should also be understood in a broad sense which translate to the political idea of central government. The organisational strategies of these states tend to be individualistic, which is usually associated with Western states, and collectivism to the Eastern states. Dispersal rate and population density contribute to a uniform idea of a group and correlate with the occurrence of cases of dissidence. In other words, how space is covered in the relation of forces of governance and the individual is important.

Because in individualistic societies there's a tendency to institutionalize social ills, the study of dissidence is easier in the collectivist societies. China for example, which counts with some of the most densely populated cities in the world, is the area with most concentration of reported cases of dissidence. In the case of tolerance, there seems also to be a correlation with authoritarian policies and cases of dissidence. However, strong dominance hierarchy seem to almost completely deter dissidence by sheer force which can even culminate in the execution under suspicion. As an example, it should be mentioned North Korea, a neighbouring country to China which in comparison has almost no reported cases of dissidence. This is due to the mere rise of suspicion having tragic consequences, thus curtailing any articulation of state contestation. Since North Korea's regime may be considered a case where regent forces take the group in a harmful direction, we must then consider the possibility of dissidence as a case for altruism, where the dissident puts at risk individual chances of survival in benefit of the group.

Strong dominance hierarchies and dispersal rate should also predict a higher incidence of dissident cases in societies with low social mobility. Combined, they make a case for a type of parochialism where group conformity is defined by the top ranks. Since Salomon Asch's pioneering study on social conformity, normative influence has consistently been tested and proved to

persuade individuals to match their behaviour to the group even when they know it to be wrong. But emancipation comes at a cost. For example, although researches in the activity of the rostral cingulate and ventral striatum via learning mechanisms provide evidence that social group norms evoke conformity (Klucharev et al, 2008), social isolated individuals have been shown to have a brain on high alert for social threats (Cacioppo & Hawley, 2009) drawing from cognitive resources depleting energy that could be applied seeking a more advantageous situation for individuals themselves.

If we are ready to consider dissidence a type of altruism, it then shares the most asymmetrical relative reciprocation amongst any other. This rationale tells us that dissidence can be viewed as a warning call against abstract-theoretical universality in societies. From a genetic standpoint, an explanation why beneficial episodes of individual selection such as dissidence do not exceed that for group selection, is that epistasis for fitness severely limit the efficiency of individual selection, at the same time that it opens opportunities for group selection (Wade, 2001). Dissidence seems then to be in response to a situation where the genetic programme is at odds with cultural directives, and where cultural evolution may dangerously be taking the lead in coevolution. This might explain the mechanisms why knowing what we know, how much we are willing to trade-off in the individual - group/state relationship.

Assuming there are evidence where ideological constructs in cultures lead to their own demise (as for example the depletion of natural resources, war, etc), dissidence in other species cannot happen simply because culture do not drive the group away from chances of survival. Analysing the impact of Godels' incompleteness theorem in social theories, Hokky Situngkir asks *how far can we go through social systems?* (Situngkir, 2005). In this aspect culture selection may not be much different from natural selection in increasing our chances of survival. Finally, all the aforementioned suggests that dissidence operates in what is termed as interdemic selection, i.e. the populational representation of the individual dies or gives rise to new populations at the rate of which harmful or beneficial rates are accommodated.

## Conclusion

When social isolation occurs in strong parochial societies, with seemingly unsurmountable injustice and little chance of mobility for the individual, extreme rectification is sought in a radical discourse. To revise the validity of general assumptions and access the functional state of a group against the normative, requires observability and counterintuitive thinking. These circumstances and these qualities in individuals have often promoted a saltation in societies. At historical times when religion and politics are forces of indoctrination, counterintuitive thinking allows for new solutions and to break the paradigm.

Although it is just from the xvii century that the term dissidence has consistently been used, our knowledge of dissidence, for as much as it is structured, must contemplate the questioning of discipline. This which we may call indiscipline, is what allows the change in paradigms but also what makes dissidence illusive to describe. We have been able to review and delineate some hypothesis on this phenomenon that hopefully will help to have a better understanding of how the individual relates to modern societies. It is important to retain that the concept of dissidence gains strength at the historical times of industrialization, together with the use of utilitarian ideologies in social engineering. Observability is not on itself an omen. On the contrary, it is understood to rise reciprocity and we can assume it also deters defectors. Although, the same exposure can constrain. Spread means of control at the service of an oppressive state provokes dissident behavior. We are now at the point where the panopticon society has reached a peak where it has alienated the majority from virtually all privacy. Because new technologies and the ensuing of global trade promises ever more ways of alienation, we perhaps should take dissidence as a healthy sign in our societies. Curiously, dissidence evolutionary function seems unique in that is less one of adaptation but in preventing defective or inadequate adaptation.

## Bibliography

- Beals, Kenneth L., and A.J. Kelso, Genetic Variation and Cultural Evolution, *American Anthropologist*, 1974
- Bourke, Andrew F. G., *Hamilton's Rule and the Causes of Social Evolution*
- Brosnan, Sarah F., *Justice and Fairness-Related Behaviours in Nonhuman Primates*, National Academy Press, 2007
- Chiao, John Y., and Katherine D. Blizinsky, Culture-Gene Coevolution of Individualism – Collectivism and Serotonin Transporter Gene, *Proceedings Royal of the Royal Society*, 2009
- Chiaburu, Dan S., Tomas Thundiyil, Jiexin Wang, *Alienation and its Correlates: A meta-analysis*, Elsevier, 2014
- Cacioppo, John T. and Louise C. Hawkey, *Perceived Isolation and Cognition*, NIH Public Access, 2009
- D'Errico, Francesco and Chris B Stringer, *Evolution, Revolution or Saltation Scenario for the Emergence of Modern Cultures*, *Philosophical Transactions*, 2010
- Eisenberger, Naomi, Matthew Lieberman and Kipling D Williams, *Does Rejection Hurt? And fMRI Study of Social Exclusion*, *Science*, 2003
- Finkel, Eli J., Caryl E. Rusbult and Madoka Kumashiro, *Dealing with Betrayal in Close Relationship: How does Commitment Promote Forgiveness*, *American Psychological*, 2002
- Goodall, Jane, *Social Rejection, Exclusion and Shunning Among the Gobe Chimpanzees*, Elsevier, 1984
- Harlow, Harry F., Robert O. Dodsworth and Margaret K. Harlow, *Total Isolation in Monkeys*, read before the Academy, 1965
- Holland, Wendy, *Reimagining Aboriginality in the Circus Space*, 1999, *Journal of Popular Culture*
- Joseph, Rhawn Gabriel, *The Human Brain*, 2015, *Cosmology Science*
- Johnson, Eric M., *The Evolution of Group Selection*, 2011, UCB, *Studies in the History of Biology*, Volume 3, No.4
- Kahneman, Daniel, Jack L. Knetsch, and Richard H. Thaler, *The Endowment Effect, Loss Aversion and Status Quo Bias*, *Journal of Economic Perspectives*, 1991
- Klucharev, Vasily, Kasia Hytonen, Mark Rijpekma, Ale Smidts and Guillen Fernandez, *Reinforcement Learning Signal Predicts Social Conformity*, 2008, *Cellpress*

Kross, Ethan, Marc G. Bergman, Walter Mischel, Edward E. Smith and Tor D. Wager, Social Rejection Shares Somatosensory Representations with Physical Pain, PNAS, 2011

Laland, Kevin N., and Gillian Brown, Sense and Nonsense, 2002, Oxford University Press

Macdonald, Kevin, Indoctrination and Group Evolutionary Strategies, ResearchGate, 2014

Martin Jay, A History of Alienation, 2018, Aeon newsletter

Muhammad Iqbal Shah, Marx's Concept of Alienation and its Impact on Human Life, Al-Hikmat, 2015

Nissen, Henry W., Individuality in the Behaviour of Chimpanzees, American Anthropological Association, 1956

Oakley, Barbara A., Concepts and Implications of Altruism Bias and Pathological Altruism, The National Academy Press, 2007

Our World in Data, Fragile States Index, 2014

Parvizi, Josef, Vinitha Rangarajan, William R. Shirer, Nikita Desai, and Michael D. Greicius, The Will to Persevere induced by Electrical Stimulation of the Human Cingulate Gyrus, Cell Press, 2013.

Peters, Uwe, Human Thinking, Shared Intentionality, and Egocentric Biases, SpringerLink, 2015

Platt, Michael L., Robert M. Seyfarth and Dorothy L. Cheney, Adaptations for Social Cognition in the Primate Brain, 2016.

Raleigh, Michael J., and Michael T. Maguire, Animal Analogues of Ostracism: Biological Mechanisms and Social Consequences, Elsevier (1986)

Ross, Lee, The Intuitive Psychologist and His Shortcomings: Distortions in the Attribution Process, Elsevier, 1977

Searle, John, Theory of Mind and Darwin's Legacy, The National Academy Press, 2007

Seyfarth, Robert M., and Dorothy L. Cheney, Affiliation, Empathy, and the Origins of Mind, The National Academy Press, 2007

Situngkir, Hokky, How Far Can We Go Through Social System, draft to be submitted to the Journal of Social Complexity, 2005

Stein, Murray B., Nicholas J. Schork, and Joel Gelernter, Gene- by- Environment (Serotonin Transporter and Childhood Maltreatment) Interaction for Anxiety Sensitivity, an Intermediate Phenotype for Anxiety Disorders, Nature, 2008

Statistics Times, List of Countries by Population, Last Updated 2018

Statistics Times, List of Countries by Population Density, Last Updated 2018

Statistics Times, Global Peace Index, Last Updated 2018

Wade, M. J., Group Selection in Encyclopaedia of Genetics, Elsevier, 2001

Yoeli, Erez, Moshe Hoffman, David G. Rand, and Martin Nowak, Powering Up with Indirect Reciprocity in a Large- Scale Field Experiment, National Academy Press, 2007

Trivers, Robert L., Deceit and Self-Deception, Penguin Books, 2013

Trivers, Robert L., The Evolution of Reciprocal Altruism, The University of Chicago Press, 1971