



# Thoughts for coping with humanity's challenging future

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Received 12 October 2020; Accepted 25 January, 2021; Published 16 February, 2021

## ABSTRACT

Humans collectively may not agree, but environmentalists and the scientific community in particular has been warning us for several decades that we are headed for rough times ahead. This essay outlines some of the major issues. Examples are: rapid human population growth, climate change, continuing discrimination among racial and cultural groups, increase in the frequency of pandemics, increase in immigration pressures, and a decline in so-called ecosystem services that collectively make it possible for humans to thrive. Two possible examples are pollination of useful plants and provision of clean drinking water. Also, governments at multiple levels will shift from democracies to various forms of authoritarianism. Especially important is the recognition that social species like humans have social behavior that supports the group's survival. And this comes in two modes: within social group and interactions with the biological and physical environments outside of the particular social group. Most importantly both types are required for healthy groups. Lastly, the role of behavioral fairness is discussed as it relates to the success of social groups. One aspect of fairness is the presence of democratically determined penalties for transgressions. These must be sensitive to the severity and nature of the transgression. Successful groups will insure that all members achieve an education level that will allow them to meaningfully participate in the group's democratic processes

**Keywords:** Authoritarianism, Climate change, Cooperation, Democracy, Fairness, Pandemic, Social behavior stress, Xenophobia

## INTRODUCTION

One need only pay attention to the daily news to realize that humanity is facing difficult challenges ranging from local to global scales (Brown 2006, Lidicker 2020). The current Covid 19 pandemic is a lesson for illustrating how quickly the world economy can disintegrate into confusion with huge mortality rates, expanding poverty, loss of jobs, increasing criminal activity, disruption of our education systems, government poorly functioning, loss of cultural activities, and generally high stress levels.

This essay addresses some of these issues with a particular focus on human social behavior. It is an invited adjunct to a recently published review of the human predicament from a scientific perspective that emphasizes human population growth and social behavior issues (Lidicker 2020). One objective is to improve our efforts to achieve human sustainability on the planet Earth, and to enhance our quality of life in the process. On the front page of a prominent

newspaper (dated Sept. 17, 2020) there were two headlines that accurately portray our current predicament. One was "Once-vaunted health facilities now in tatters," and the other was "29 cops linked to neo-Nazi propaganda suspended." These headlines emphasize that our future efforts must be to pursue peace, happiness, fairness, and prosperity for all of humanity. Our current understanding of the human trajectory from a scientific perspective is discussed in Lidicker 2020 which treats both ecological and social behavior knowledge. Here I review the current trajectory and then consider how we might persuade all of humanity to work for a more comfortable future. An underlying issue is finding how we can cope with the projected future growth in numbers of humans (Brown 2006, Crist and Mora 2017, Lidicker 2020).

## SOME CURRENT ENVIRONMENTAL IMPEDIMENTS (in brief)

We begin by reminding ourselves of some of the challenges we face. Among many possibilities ten are chosen as

illustrative examples.

1). Underlying a host of problems is the all important fact of rapid human population growth. We are projected to number 7.6 to 10 billion by about 2050 (Baillie and Zhang 2018).

2). Rejection of scientific evidence by a significant percentage of humanity. This is particularly flagrant and dangerous when it relates to climate change (Meffe, G.K. 2007) which many consider a hoax. This denial is in spite of the fact that many of the early predictions are now coming true (Worth, 2018).

3). In spite of important improvements in recent years, humanity remains plagued by significant amounts of prejudice, hatred, and discrimination among racial and cultural groups (Sahel 2018). There is even xenophobia among slightly separated communities. Some discussion of what causes these behaviors is described in (Lidicker 2020), and the evidence is all around us.

4). In (Lidicker 2020), 19 predictions are included for humanity's immediate future. From these, I have chosen 9 as being particularly relevant to this analysis, and they are as follow (see asterisk\*):

\* The average standard of living will decline, probably unevenly.

\* Human immigration pressures will increase dramatically.

\* Health maintenance levels and average life expectancies will diminish.

\* Human immigration pressures will increase dramatically.

\* The prevalence of disease outbreaks and pandemics will increase in frequency.

\* Criminal activity in general will increase as well as both domestic and international terrorism.

\* Governments at all levels will become more authoritarian

\* Social groupings above the levels of neighborhoods and small towns will become increasingly xenophobic.

\* Support for education and research will decline as they are threats to dictatorships.

5). The Covid 19 pandemic is causing numerous health and economic problems (Worth 2018) as well as cancellation of innumerable public events worldwide. Moreover, future pandemics are forecast as inevitable (Murikami et al. 2019).

6). There is a steady increase in the concentration of carbon dioxide in the Earth's atmosphere that contributes significantly to climate change and poor air quality (Meffe 2007, Plass 2010, Worth 2020).

7). An Increase in frequency of destructive hurricanes will continue to worsen (Meffe 2007, Murikami et al. 2018).

8). Significant chemical and physical changes are occurring in the northeastern Pacific Ocean such that major shifts in the composition of the biota are anticipated (Somero et al. 2016).

9). Environmental biodiversity, human microbiota complexity and allergies are interrelated (Hanski et al. 2012).

10) Newspapers (2020, Sept.) report widespread hunger in the San Francisco Bay area although this is a relatively high income area.

## **SOCIAL BEHAVIOR**

Humans are social creatures and much of our successes and failures in life are strongly influenced by our interactions with fellow humans. It is therefore not surprising that social behavior is a major ingredient in every one's life story. This brings us to examine a most important aspect of mammalian social behavior that badly needs major improvement. As explained below, there is a widespread failure to recognize that social behavior is a dual phenomenon, especially in species with complex social behaviors such as humans, as well as many of the great apes and probably cetaceans and pinnipeds as well. These species almost surely exhibit dual role social behaviors (Lidicker 2020, Reich 2019).

Those species with complex social behavior have two major components to their social behavior. On the one hand they exhibit social behaviors that form the fabric of social groups. Members live together and give each other mutual support in many aspects of survival and reproduction. Examples would be family groups, neighborhoods, or villages, sport teams, professional organizations, labor unions, political parties, and many other kinds of groups of various sizes. What they all have in common is mutual interactions that promote the welfare of group members. However, in addition there is a type of social behavior that serves to promote the welfare and survival of the social groups themselves. Almost all kinds of social groupings require that there is a need for group members to interact with the biological and physical environments outside of their home group (Crist and Mora 2017). The challenge is that even successful social groups require that they pay serious attention to nurturing conditions outside their immediate group boundaries. These are absolutely required for survival of the home group. For example, food supplies may need to be grown, hunted, or harvested from areas outside the focal social group itself. Reliable sources of clean drinking water need to be found, suitable habitats for prey and domestic animals, resources are also needed for building materials for shelter, etc., fossil fuels for transportation and running machinery, climate moderation, decomposition of organic materials, pollination, etc., Ironically, in recent years evidence has accumulated that humans benefit from making regular contact with remnants of the natural world. The benefits come from regular exercise, improved immune systems resulting from the benefits of having an increasingly complex microbiota in our bodies, particularly in the intestines (Liddicoat 2016, Nontira 2009).

Moreover, there is increasing evidence that we benefit from just experiencing time spent in relatively natural areas such as parks.

While these benefits derived from resources outside of our social group boundaries are slowly being increasingly appreciated for their providing this multiplicity of important services and resources (Crist 2017), much of humanity has not yet appreciated this reality (Hanski 2012, Reich 2019).

Although access to these essential services does not necessarily involve social behavior, much does, and this defines our dual role for these behaviors.

Starting about 120 years ago in the USA and gradually in other countries as well, our focus on social behavior has drifted so as to largely ignore the benefits from outside of social groups on a wide-ranging scale. Now social access is measured mostly in monetary wealth. The objective of jobs and investments is money, and the more the better. The richest few now have most of the political power. Consequently any attention to the importance of non-money benefits is little recognized. The result is that hardcore capitalism is now rampant, and moreover, any efforts to support other objectives are often belittled as foolish altruism or even worse as socialism. Of course it is socialism but the difficulty is that in the US and many other countries socialism is equated to communism which of course it is not. The challenge for social behavior is to recognize the essential dual role for social behavior and try to get our leaders to act accordingly (Ballie and Zhang 2018). As it is now, modern social groups tend to ignore the fact that social behavior has this dual role. This failure precipitates a downward trend in which citizens are increasingly unhappy, dishonesty and criminal behavior increase, and there is a drift into authoritarianism. The social group then deteriorates, and may disappear.

The examples of dual role social behaviors that we have used here have focused mainly on small social groups. However the same dual role model can be scaled up to much larger groups. Take nations, for example, or organizations such as scientific societies. In both cases it is easy to imagine behaviors that function within the organization coupled with behaviors that function as cooperation with other outside groups and/or elements of the biological and physical environment. A scientific journal helps communication and cooperative behaviors within the organization, but also makes favorable interactions with other societies both feasible and a source of monetary support.

## THE IMPORTANCE OF FAIRNESS

Since fairness is promoted in this essay as being important for the welfare of social groups, it is appropriate to define it here. Basically fairness implies equal treatment for all. Prohibited are biases based on racial, cultural, or any other discriminatory traits. Accommodations can be made, however, for age, sexual identity, health, and for disabilities. Social groups in which fairness is accomplished successfully will

likely be healthier, happier, have more successful reproduction, and perhaps generate more emigration. In a fair society or social group the individual members are all treated equally and consistently in accordance with their own behavior relative to the rules established by democratic processes. Democracy is critical because it is important that all members of the group feel that they have some meaningful input into group rules and therefore are aware of acceptable behavior. It is also very important that all members are subject to disciplinary treatment that is appropriate for any violation of the rules. The punishment must be adjusted to a severity that is appropriate for whatever reason that the transgression was committed, and for the severity of the transgression. It follows that modern societies must provide educational opportunities for its citizens to a level that they can participate effectively in the democratic process. In principle a group need not be democratically organized, but if this is the case, it will be very difficult to avoid the group's becoming a dictatorship. Especially will this be the case if the group should increase in size. A further impediment to democratic maintenance will occur if there are large discrepancies in the income of various members.

As discussed above, in modern societies, social groups tend to ignore the fact that social behavior has a dual role, and by ignoring this dual arrangement such groups function at a great disadvantage, and in some cases can involve fairness issues as well. An interesting example of this dilemma that has been in the recent news involved a religious leader insisting that his followers not wear protective masks for stopping the spread of a pandemic disease as prescribed by local authorities while they were in his church. No awareness was shown that infected followers could subsequently spread the disease when not in the church.

To the extent that social groups focus only on their own welfare and forget the critical importance of factors outside the group that actually support the group's existence, the success of the social group will be compromised, citizens will be unhappy, dishonesty will increase along with unfair behaviors. Compromise and consensus will be difficult to achieve leading to a drift toward authoritarian government processes. And that then is the end of fairness for that social group.

In a fair society or social group the individual members are all treated equally and consistently in accordance with their own behavior relative to the rules established by democratic processes. The latter is critical because it is important that all members of the group feel that they have some meaningful input into group rules. There are, however, many nuances and provisos not included in this basic definition. For example, a rule could be broken with group support if it was the case that the individual involved thought it was okay to break the rule under some particular circumstances, and this exception was generally approved by the group members. Ultimately more complete understanding of "fairness" depends on the nature of the individual group.

## CONCLUSION

In principle, a fair group need not be democratically organized, but if this is the case, it will be very difficult to avoid the group's becoming a dictatorship. Especially this will be the case if the group should increase in size. A further impediment to democratic maintenance will occur if there are large discrepancies in the income of various members. Some definitions of fairness specify that rules must be applied equally to all members of similar age. Rules, however, can be changed by democratic processes. Individuality should be respected in the context of social responsibility. Individuals who violate the rules should be punished in a manner and intensity consistent with the seriousness of the transgression. All adults should have political equality. Rules that are consistent with the biological and geographical realities and the inevitable variations in individual ages, abilities, and local needs.

Efforts of individuals directed toward personal and family livelihoods must be simultaneously supportive of society's needs. A fair society will insure that all members obtain sufficient education so that they can meaningfully and positively contribute to the welfare and functioning of the whole. Fair societies will likely endeavor to take collective action to maintain and enhance the health of its members. This action will include care for those temporarily incapacitated or those less able to contribute for reasons of age, disability, or genetic constitution.

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