Fractals and the

Common Heritage of Humanity

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ABSTRACT

The search for a conceptual foundation for extending economic international cooperation has led the author to a consideration of the concept of fractals -- patterns present regardless of degree of magnification. The argument is made that open participatory structures of governance which are appropriate locally and nationally, are no less appropriate at the supranational and even global levels. Following Riane Eisler, the author suggests that to the extent that society shifts from the dominator to the partnership model the prospects for global social justice are enhanced.

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FRACTALS AND THE COMMON HERITAGE OF HUMANITY

> We need to take a leap of the imagination and envision nations as the best kind of families: the democratic ones we are trying to create in our own lives.
>
> --Gloria Steinem (1993)

> There is no longer a clear division between what is foreign and what is domestic. The world economy, the world environment, the world arms race -- they affect us all.
>
> --Bill Clinton, Inaugural Address, Jan. 20, 1993

INTRODUCTION

Despite the title, his paper will not be a rallying cry for chaos as a new paradigm for the social sciences. It is not my intention to try to convince you that deciphering social processes can only be accomplished by mastering the intricacies of chaos theory. My approach to chaos theory is no different from my approaches to other theoretical formulations: we should use whatever metaphors and insights that seem to aid in understanding phenomena under consideration, but abandon these logical constructs if they show signs of becoming strait jackets to human action rather than guides to

enhancing well-being (Friedrich,1988, p. 444). The concept of fractals is just such a useful notion, as I shall shortly explain.

One author has suggested that chaos theory is indeed inappropriate in the social sciences and is being used to further certain political ends (Buhl, 1992). There is nothing inappropriate about pursuing "political ends", that is the very nature of social process. What is ill-advised is to try to cloak our agenda in the garments of scientific principles that don't fit with the complexities of human action. There is a danger that if worthy ends rest on shaky foundations, that they may be thrown out with the proverbial bathwater.

I. INTERNATIONAL COOPERATION

If this paper is not an espousal of chaos theory, what is it then? I have on four previous occasions presented papers on international cooperation at annual meetings of the Canadian Association for the Study of International Development (CASID). In three of those papers I either suggested elements in a possible future scenario or elaborated on difficulties in arriving at the arrangements which I regarded as desirable and necessary (Frankman, 1988, 1990, & 1992). The other paper presented an historical account of the rise and fall of varieties of wartime economic and political cooperation between the United States and the Latin American countries. As the tide of the war turned decidedly in favor of the Allies, U.S. enthusiasm for planning, central controls, and commodity price guarantees quickly evaporated (Frankman, 1987).

Visions of expanded international cooperation are likely to carry with them institutional consequences: either new agencies of the United Nations and/or an expanded role for the International Monetary Fund, the World Bank or yet to be created siblings for the Bretton Woods twins. Whatever agreement there may have been to the logic of extending social justice to the global level or, more modestly, extending the concept of fiscal federalism (i.e., taxation and public expenditure residing at an appropriate jurisdictional level) beyond the bounds of the nation-state, dissolves in the face of objections leveled at the current role of the UN, the IMF and the World Bank.

I have blithely waved my hand at these objections in the past and in a reversal and paraphrase of the classic line from the film *Field of Dreams,* I have insisted that "if the will is there, it will be built." Unhappily, it is by no means clear that the requisite will is anywhere on the horizon. The share of official development assistance to gross national product for the OECD countries has hovered for years at one-half the long ago agreed upon target of 0.7 percent, with the United States moving further and further from that goal.

For the requisite will to emerge, solidarity must extend beyond national boundaries. In 1944 Friedrich Hayek expressed his doubts: "Who imagines that there exist any common ideals of distributive justice such as will make the Norwegian fisherman consent to forego the prospect of economic improvement in order to help his Portuguese fellow . . . ?" (Hayek, 1944, p. 222). Of course, one doesn't need to go back many decades or centuries, depending on the country, to find a time when common ideals of distributive justice did not exist within a nation state. In the face of economic globalization and the rise of free

market theology, even the within-nation solidarity, that had been so carefully nurtured, especially in the schools, in so many countries, is on the wane. In both Canada and the United States, we are in the midst of the "fend for yourself era" (Genovese, 1991, 84) in which the central government washes its hands of responsibilities for national equalization, forcing cash-strapped provinces or states to do likewise. Clearly, in the face of changing circumstances, it is more than just development that has to be rescued.

II. A FRACTAL SOCIAL ORDER

The more I have searched for the will for expanded international cooperation, the more I have come to the conclusion that individuals must have a unified view of the social order from the immediate family to the global family and that institutional arrangements must mirror that viewpoint. That unified view must condition interpersonal relations in virtually all social settings. It is the idea of a unified view that accounts for my invocation of the notion of fractals, which I understand to be irregular, complex patterns which are repeated at all scales of magnification from the most minute to the largest.

In spite of considerable evidence to the contrary. I contend that the unified view necessary for expanded international cooperation and survival is, in fact, emerging. The complexity of social life, often blinds us to changes that are occurring all around us, especially when we may still have to behave differently in each of the numerous social sets of which we form part (nuclear family, school association, neighborhood association, work, car pool, to name but a few). The transition from

order to disorder and then to a new order which is clearly discernible to a historian poring over archival materials is rarely so apparent to those who are living the experience, as I firmly believe we are. Our transitional task is the difficult one of envisioning the possibilities of the new order so that we may assist, by our daily behavior, in hastening its arrival.

At the 1992 CASID meeting, David Moore reflected on the "lack of directive power" of some of the emerging keywords of the 1990s, specifically sustainability, equity, and participation (Moore, 1992). Both Moore's comment and the ever increasing prominence given to these keywords with each passing day reflect the disorderly transition from one order to a new one. Despite the apparent setback represented by the resurgence of free market approaches in the 1980s, we have come a long way since the 1960s, when the development literature focussed in a singular manner on top-down policy by national governments as the critical element in promoting development. To the extent democracy was even discussed in those early years, it was in the context of the holding of periodic free elections, not in terms of local initiatives.

The last two decades or so, have seen the blossoming of a new vocabulary: everywhere that we turn, north and south, we hear about empowerment, participation, non-governmental organizations, local control, democratization, grassroots initiatives, human rights, and freedom. While the old paradigms are still around, animated discussion and action have been set in motion by this succession of phrases which reflects a new viewpoint. Indeed, to the extent that free markets lead to the flourishing of individual initiative and are a complement not

a substitute for collective action, then they too can be thought of as part of the transition to a new order.[1] The "directive power" in the new order comes from the individual and finds its expression at all the many different levels of society at which the individual interacts.

Perhaps the "lack of directive power" of the emerging keywords can be related to the geometry of the social fractals of the slowly waning old order. In the view of Riane Eisler, central to the configuration of our social order has been what she terms the "dominator model" (Eisler, 1987). The dominator model can best be illustrated by a small sample from the countless popular sayings and admonitions associated with its lengthy reign over the social order. For example,

> Children should be seen and not heard.
> If I want your opinion, I'll ask for it.
> You can't fight City Hall.
> Ours is not to reason why, ours is but to do or die.
> My country, right or wrong.

The list could be multiplied--I'm sure some painful examples can be supplied from your own experience, but the idea is a simple one: the emphasis is clearly on obedience, deference to authority, and a rigid hierarchical ordering of society, "backed up by force or threat of force." (Ibid., p. xvii) The dominator model exerted a powerful, but not fully exclusive, influence on the fractal geometry which tended to characterize the family, the workplace, the school, the community, the congregation and the polity.

Eisler argues in *The Chalice and the Blade: Our History, Our Future* that in antiquity the dominator model had largely displaced the "partnership model". The basic distinction which she makes between the two models, is that in the partnership model "social relations are primarily based on the principle of *linking* rather than ranking . . . diversity is not equated with either inferiority or superiority" (Ibid.). She urges us to make the effort both as individuals and as unashamedly normative social scientists to help speed the return of the partnership model[2] (Ibid., pp. 185-203).

The nature of the dominator model virtually requires an adversary. In a world of nation-states, loyalties tend to stop at boundaries that have been drawn on maps and carefully staked out with control points and barriers.[3] Over the past century a variety of social safety nets have been laboriously crafted in the industrialized countries. Their benefits tend to be limited to the citizens and/or residents of a jurisdiction. While charity may extend beyond national boundaries, solidarity as expressed in social programs begins and ends at home.

This conventional limit to our vision of the social order is both anachronistic and dangerous in a context in which human activities become increasingly globalized. Yet blinders and habits of mind persist. As Gloria Steinem observes: "Even those of us most skeptical of nationalism have drifted into considering it a necessary evil" (Steinem, 1992, p. 16). Acceptance of the logic of the partnership model implies that our loyalties extend beyond the heretofore customary limits and that we see ourselves as not only having

allegiance to a particular nation and a set of its subnational jurisdictions, but ultimately to all the peoples of the Earth.

III. THE COMMON HERITAGE OF HUMANITY

And so I return to the question of international cooperation. I suggest that we should see the world as the largest of the fractal social orders of which we are each active participants. As the partnership model envisions our being empathetic to the interests of the members of the multitude of social orders with which we are associated, it is appropriate for us to consider extending numerous policy initiatives to levels beyond the boundaries of the nation-state and even to the global level. This is hardly a novel idea, it is implicit in the concept of fiscal federalism, which calls for public sector revenue-raising and expenditure to occur at a level appropriate to the problem under consideration. Most of the fiscal federalism literature, however, follows the norm of halting the analysis at national boundaries.

Words and phrases have great power over our perceptions. To make a logical connection is the easiest part of the task; to capture the imagination is the real challenge. The phrase "Common Heritage of Mankind" entered our vocabularies in the 1970s during the lengthy meetings of the United Nations Conference on the Law of the Seas. The concern of the negotiators was to control the use of the seabed portion of the global commons and to provide for a sharing of revenues resulting from exploitation of our "Common Heritage." Control of resource use and sharing of <u>potential</u> revenues from the global commons have been the focal points in extensions that have been

made of the Common Heritage principle to outer space, to the Moon, and to Antarctica (Ervin, 1984 and Herber, 1991).

The developing countries were optimistic that funds would flow to them as a result of these initiatives, but their patience has not yet been rewarded. A different rendering of the Common Heritage principle may offer greater promise. Edith Brown Weiss in addressing the neglected question of intergenerational equity has spoken of Common Patrimony: she goes beyond the Law of the Seas-inspired concern with areas not subject to national jurisdiction, to focus on the entire planet as a "'global commons' shared by all generations." (Weiss, 1989, p. 289) As she states:

> . . . each generation receives a natural and cultural legacy in trust from previous generations and holds it in trust for future generations. This relationship imposes upon each generation certain planetary obligations to conserve the natural and cultural resource base for future generations and also gives each generation certain planetary rights as beneficiaries of the trust to benefit from the legacy of their ancestors. (Ibid., p. 2).

In speaking of the rights of beneficiaries, Thorstein Veblen long ago spoke of technology being our collective "joint stock of knowledge" (Veblen, 1919). In a similar vein, I have previously suggested that the Common Heritage of Humanity can be seen as all-embracing:

> . . . a moment's reflection would tell us that virtually the entire world we live in is based on a common heritage: written and

> spoken language, the food we eat, the clothes we wear, the very thoughts we think, not to mention the technological building blocks in the machines that surround us. . . . property rights themselves are part of our common heritage. The historical accident of national boundaries having been drawn should not justify denying to the bulk of the world's population a share in the monetary gains resulting from the harnessing of our common heritage (Frankman, 1990, p. 128).

By amplifying the Common Heritage principle, we explicitly acknowledge our association with the global social order. With that, we extend to the global macrosociety the fractal pattern whose irregular shape includes, *inter alia,* partnership, reciprocity and redistribution. Is it such a leap of imagination to see ourselves as part of a fractal shape whose dimension is global? For the majority of the world's population that is now urban it is increasingly likely that some of our groupings will contain those who are not natives of either the locality or the country where we were born. Our perceptions of "others" change as we have to cooperate with them.

With the daily expansion of our store of mental images of people and places distant from our customary residence, we increasingly see the world as a unit. Indeed, were the 17th century blinders of the Westphalian nation-state system not still in place, we would, I submit, instantaneously believe that the solution to many global problems must require global cooperation.

The partnership model carries with it implications for the structure of governance in terms of the accountability and

responsiveness of governing authorities to the people affected. Our support for any level of government is likely to increase in proportion to our sense that we have an effective voice and our perception that our needs are met by its functioning. If attitudes throughout the social order continue to change in a manner consistent with the partnership model, we can expect concomitant changes in institutional forms. With those changes one can expect the eventual acceptance of expanded international cooperation and of the Common Heritage of Humanity as a basis for equity across peoples and across time. This is implicit in the vision with which Riane Eisler concludes her book: where the partnership model guides society, "our drive for justice, equality, and freedom, our thirst for knowledge and spiritual illumination, and our yearning for love and beauty will at last be freed. . . . both men and women will at last find out what being human can mean"[4] (Eisler, 199, p. 203).

CONCLUSION: POETRY MATTERS

To see a World in a Grain of Sand
And a Heaven in a Wild Flower,
Hold Infinity in the palm of your hand
And Eternity in an hour.

--William Blake, "Auguries of Innocence" (c. 1803)

Chaos theory has many useful insights from which students of society can gain. But perhaps the most valuable gift that new scientific developments can offer us is to free the social sciences,

and especially economics, from the grip of "physics envy"[5] which drives us further and further into sterile mathematization. The clear message arriving from science is that our precision is misplaced and that it is entirely appropriate to be poetic. And, yes, we have more to learn than we ever imagined from our colleagues in the humanities, if they are willing to forgive us for our past pretensions.

What the human enterprise needs as we hover once again (or is it as always?) at the edge of the abyss, is not yet another equation or another diagram, even a three dimensional, multicolored computer-generated one, but rather images that lift the human spirit, we are in need of poetry, of songs, of symbols, of noble words, and even of slogans that capture the imagination and unify the human family.

The transition that we are in the midst of is not a revolution, but a Reformation. We are moving toward a worldview in which personal worth and the synergistic force of partnership are celebrated, rather than suppressed, where what is likely to remain of hierarchy will bear no resemblance to the stifling expressions of rank that are still with us, and where access to knowledge will not be barred by "expert" gatekeepers. This shift represents a glorious opportunity, but it requires that we break out of our conventional ways of thinking about all types of social formations. The challenge of meeting the needs of the peoples of the world, otherwise known as the study of development, has too long suffered from a lack of vision. The message of chaos theory is that people matter, diversity matters, vision matters. Who would have thought we would need a reminder from the scientists, but it couldn't have come at a more opportune moment.

NOTES

[1]Even Karl Marx pronounced himself in favor of free trade, which he saw as destructive of the old nationalities and as likely to hasten the social revolution." (Marx, 1848, p. 245).

[2]See also Eisler & Loye, 1987.

[3]Here is what Gloria Steinem (1992, pp. 15-17) has to say on our image of nationalism:

> It remains insular and territorial, a dangerous anachronism on this fragile and shrinking planet where neither war nor environmental dangers can be contained by national boundaries anymore. . . .
>
> . . . the point of a nation is not to draw a line in the sand and keep its members behind it, but to create world citizens who are secure enough to treat others equally . . .

[4]In 1956 Lynn White, Jr. reflected that "our revolution is so new that we do not really know what a high democratic culture would look like, much less what its formal education -- that is, its organized plan for cultural transmission -- would be" (White, 1956, p. 315).

[5]The term is applied to economics by Philip Mirowski who observes that "by the 1960s the neoclassical research program became helplessly locked in to the physics of circa 1860, and persists in this predicament to the very present" (Mirowski, 1989, p. 394). He notes that if the quantum metaphor were "to be imported into economics, it would precipitate . . . perhaps full dissolution of the vaunted neutrality of the economic scientist with respect to the social object of his research." (Ibid., p. 392).

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