13 Afterword

This is phase II of a project that grew out of a desire to create a new way of talking about decision processes. In phase I, (Thomas G. H., 2006), I provided an introduction to the ideas and qualitative reasons and simplified calculations for seeing how one might address decision processes using the language of physics and differential geometry. The idea was to use a language that was created to describe and understand processes that evolve in time according to specified dynamic mechanisms. In the first phase, no attempt was made to provide a comprehensive solution to the equations, nor was there an attempt to educate the readers to the level where they could provide such solutions.

This is phase II of the project. I have identified the types of solutions found in phase I as the anlog of AC circuit solutions; game theory is analogous to DC circuits. To make this identification mathematically sound, as part of phase II, I provide the necessary background to bring anyone with basic mathematics and engineering foundations up to the level of a new way of talking about decision processes that they can apply to real world problems. The goal is that the reader should gain sufficient expertise to understand how the ideas apply. That has entailed providing the essential background into the mathematics, the physics and the economic theory.

The next phase is the interesting challenge to apply the tools from phase II and the ideas from phase I to practical decision processes. I envision that the way of looking at decisions that has been elaborated here will involve looking at empirical data in ways that will generate significant insights. It may also require new ways to look at data.

I suggest that the context for these three phases of the project is that as individuals, we have control of the possible outcomes of any decision process. Part of that context is the future. There are those that consider we can create the future as pure prediction by believing in intentionality. I don't buy that concept. I don't believe we have access to the future as something we alone make happen, especially when that future involves nature and actions of others who are not amenable to our will; even if they were, we can't guarantee they can successfully execute our proposed actions even if they agree to them.

I do buy the fact that we can shape the future, just as everyone and everything impacts that future in the normal course of cause and effect. This is not magic but observational experience that there are causes that lead to effects and these relationships follow knowable laws. One way we shape that future is to recognize that our normal method of behavior is not creative but restrictive. We have many rules that we follow that constrain our behaviors. Part of those constraints limits what we see as possible.

In *decision process theory*, these constraints are the *idiosyncratic payoffs* associated with each person about how they see the world and how they think others see the world. In addition, there are cooperative views about how pairs of us think we can work together. These views are not views of how the future must play out but snapshots of how we currently see the world. They are views of the world that occurs "now". Such views become part of the cause and effect laws of how the future will evolve; they are not the sole determinants of the future but are important contributors. The collection of all of these views, as well as the effects of the physical world, then determines what happens. The future does not spring fully formed out of nothing, but has its origins in the past. We believe this because it appears to reflect the reality of past experiences. We would have a hard-time finding evidence that contradicts this view.

We do have access to creating the future by directly working on changing our idiosyncratic views and our cooperative views of the past. It is not changing the past but more accurately articulating the past into our views. We must couple more strongly to the way things are and have been in order to allow more possibilities for the future. That is because our view of the past may in fact be overly and unnecessarily restrictive. We may add attributes to the past based on belief structures that don't represent what

happened but represent a view of what some people believe happened. That point of view may lead to actions that fail to play out as we expect because the viewpoint is an inaccurate commentary of past actions.

We then come to the view that we ***create the future*** not by causing things to happen as prediction, but we *create the future* by allowing things to happen as cause and effect based on a more realistic assessment of what has been possible. We base our view of what was possible not only by our learned belief systems but by a serious inquiry into what happened and what is happening in time and space, removing as much of our personal beliefs as possible that are in conflict with what happened. This leaves us free to *create the future* based on our desires that are more achievable. In this way we create who we are and to some extent change those around us. What can now happen, will reflect these new viewpoints.

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