

# Foreword

## UNITY-IN-DIVERSITY

I have always enjoyed works whose very processes of creation, whose manners of presentation or representation, embody the very same principles that they try to espouse. It is this reflexive aspect that is certainly at the heart of cybernetic and systemic enterprises. Appreciation of this process-oriented reading is also one way to enjoy this book, edited by Steven Wallis, *Cybernetics and Systems Theory in Management: Tools, Views and Advancements*.

With a background in cybernetics and systems, and teaching courses in this area, I often get asked questions such as “what is THE key principle that is at the heart of a cybernetic, or a systems (while related, these are not necessarily the same) approach. Now this is a difficult question to address directly since, you could say, that while at its core, cybernetics and systems approaches are about interconnectedness and a resultant emergence of those “things” that are interconnected, the very notion of a core is somewhat antithetical to cybernetic understanding. This indeed seems paradoxical –but perhaps, then, the need for paradox is itself a core concept. That is, if interconnectedness is “at the heart” would our very specification of that (any one thing being at the heart) deny the very idea of interconnectedness? Think about it. Take your time, catch your breath. Perhaps play with Gregory Bateson’s play with logical types.

So, in doing some serious play with cybernetic and systems approaches, we recognize that we may choose one core idea as a starting point but we need immediately repair the cleavage that we have created in our world(s) by making the distinction (Heinz von Foerster and George Spencer-Brown certainly invited to us to recognize how we make distinctions!) that we do, by connecting it back with that which we distinguished it from. Not so easy, is it, to continually remind ourselves to do this! A distinction-relation couplet may work as a continual process.

I mention these issues since one reading of this important edited volume is to recognize the fundamental value of the systems idea of Unity-in-Diversity. Rather than feel that all chapters in a book that connects cybernetics and systems theory to management must be in total agreement about what cybernetics and systems theory “is,” we can appreciate the family resemblances (also noting the link to Wittgenstein’s very idea of family resemblances) that form the ways of making connections. What are the manners of connection that allow for apparently different perspectives to be part of a greater whole? And what is that greater whole whose “wholeness” rests on maintaining those differences – that variety - rather than losing them? And how are these two questions themselves interconnected? It is no coincidence that the European Union makes use of this very systemic principle of Unity-In-Diversity in its mission- allowing for retaining the integrity of cultural differences, while still retaining the integration that allows for a Union to become a Union.

The notion of Unity-In-Diversity is so critical here in reading this book because it invites us to both appreciate the cybernetic ideas that are developed and advanced, while at the same time opening up to question whether these are the exact same cybernetic approaches that are “shared” by all. It invites to appreciate looking for connections, while at the same time thinking about how we make connections across differences, to create a unity – a unity that thrives on maintaining variety. Steve Wallis, in describing his read of the book he has put together, commented that perhaps it is a made up of a “team of rivals” – but they are rivals in a collaborative sense, maintaining the differences AND maintaining the connections. These surface when we think about systems theory, systems practice, and the relationship between systems theory and practice – and it is this relationship which can be seen to be a major contribution of this book.

One of the interesting tensions that has been a major conversation of the professional organization, the American Society for Cybernetics (which is much more international than its name would suggest) is that of how we offer definitions of cybernetics. As a former president of that society, it is a question I have been asked many times – as have other presidents. At the web site of that organization, Stuart Umpleby (another former president) offers a very cybernetic response to this question ([http://www.gwu.edu/~asc/cyber\\_definition.html](http://www.gwu.edu/~asc/cyber_definition.html)) by telling a story of how different critical definitions came to be those offered. It is a story of Unity-In-Diversity of its own self-definition. So we have, among others, Stafford Beer’s “science of effective organization,” Gordon Pask’s “art and science of manipulating defensible metaphors,” in addition to W. Ross Ashby’s “the art of steersmanship,” Gregory Bateson’s “a branch of mathematics dealing with control, recursiveness and information,” and the oft-recognized (but frequently misunderstood) one of Norbert Wiener – “the science of control and communication in the animal and the machine.”

There is an important side note here – particularly within the theme of Unity-In-Diversity, and terribly important for how we read this book – the misunderstanding that is frequently made of Wiener’s definition rests upon how we usually think of control. Wiener was very careful to choose the word IN, so control is a property of a system’s internal operations, rather than control OF, which would imply control from outside the system. Hence, concerns with SELF-regulation become paramount in cybernetics. Indeed, this recognition of the important distinction between control IN rather than control OF was of major importance to Warren McCulloch, one of the key figures in the development of cybernetics, in his recollection of the many sources of cybernetics.

In my own work, I have also noted that in many ways, cybernetics can be seen as a most Eastern of Western philosophical positions, foregrounding relational understanding and taking seriously questions of the relationship between the observer and that which is observed – a manner of understanding that fits nicely with many of the chapters in this volume. There is a reliance on processes of mutual relationships – building on the very idea of the Circular Causal and Feedback Mechanisms in Social and Biological Systems that were the basis of the seminal Macy Conferences (see the wonderful accounts of these conferences by Steve Heims, *The Cybernetics Group*, and Jean-Pierre Dupuy, *The Mechanization of Mind*, for more about this).

This is a book, then, that invites exploring many different kinds of critical mutual relationships. And, out of that frame of mutualities, it is a book that invites asking profound questions about the very assumptions that form the basis for those parts whose particular “partness” may derive from their very relationship.

Of course, the chapters are not just about cybernetics and systems theory. They are about how to connect ideas of cybernetics and systems to how we enact management processes. The notion of tools

for management rings loudly here – it is even part of the subtitle. But what does it mean to think about tools from a cybernetic perspective? Might the tools also be “things to reflect with, together with others,” for example – so what emerges from the use of those tools could also be new questions about what kind of organization we may be “managing” (or even, what using diverse metaphors of “managing” do to how we think about our organization and its constitutive relationships).

Often, the framework within which questions and issues of management cybernetics is done is one of management (or leadership, for that matter) being an “application” of cybernetics. Cybernetic principles are taken as the “given” and the organization the scene of their application, with the principles being unchanging. But in a book such as this, which is about meta-theory as much as management, we are encouraged to rethink the very paradigmatic basis for anything being “applied” – which privileges, to be sure, the theory. Instead, what a volume like this encourages us to do is to think of cybernetics (or systems) and management as mutually intertwined – as theory and practice. Cyberneticians can learn as much about cybernetics, or systems theorists about systems, from seeing how those managers who describe themselves as coming from a cybernetic perspective enact those ideas in practice. Indeed, their very use may alter the theory and the theoretical frames. What we are encouraged to do here is to change the way that we view the relationship between theory and practice – and perhaps, as Will McWhinney has noted (in his *Paths of Change*, among other places), allow this recognition to become the basis for a meta-praxis. Perhaps a movement away from the idea of “applied” to the idea praxis, as some in this volume could be seen to encourage, signals such a shift.

But this is just one of many mutualities offered by this book that we need take seriously. Understanding theory and practice as intertwined, to be sure, is a good starting point. Yet so is the relationship between management and what it might often be distinguished from – for example, leadership. How are management and leadership interconnected in a mutually informing relationship? Might even asking that question allow us to see, in a deeply systemic way, managing as a property of a whole system, rather than what one individual does? And what are the consequences of that systemic approach?

This volume also, including in its introduction, a recognition of different “theories” of systems at play here. Steven Wallis very nicely uses this recognition as a way to assert the importance of meta-theory as part of the cybernetic and management program (with managers and designers being meta-theorists too, in the strong sense that Don Schön implies in his *Reflective Practitioner*). Yet, in the same way that concepts at the same logical type might be mutually related, such as theory and practice, management and leadership, we might look at how concepts at different logical types, such as theory and meta-theory, mutually inform each other – challenging notions of fixed hierarchies of meaning in a delightfully cybernetic way. In other words, we are invited to look at how a context that might ordinarily allow for making meaning of events within it, might also be questioned (and then perhaps altered) by those very “situated” events.

Continuing, we are invited to consider mutualities of praxis and meta-praxis – and perhaps, meta-theory and meta-praxis, and maybe even, crossing over a boundary, meta-praxis and theory. In so doing, since complexity is also a key theme of this book (for example, the chapter by Kurt Richardson), considering the mutual relationship between complexity and simplicity – how each requires the other – can also be of “use” in managing and beyond. Perhaps it is the design of the very reflective space to consider these relationships – again, out of the frame of Unity-In-Diversity – that can be a valuable “tool” emerging from the interconnection of the authors here.

Gregory Bateson, in *Mind and Nature*, and elsewhere, invites us to consider the “patterns that connect” as a hallmark of his cybernetic thought and practice. In this volume, several key themes (and ques-

tions!) emerge out of the chapters and the spaces in between them. We have the themes, so important to a management cybernetics, of innovation, and of creativity AND the relationship between innovation and creativity. How do we create space for the new, the novel, while still maintaining the integrity of our identity – whether it be our personal identity or what we value as our organization’s or our community’s identity?

And then we have theme of an evolutionary approach to questions of success of our managing process. Might we, in evaluating managerial moves, consider how we know if these strategies, innovations, etc. work? How do we learn along the way by carefully considering what “works” means? And might this be different when viewed from different perspectives within the system? And how is “withinness” itself understood from different perspectives – questions of boundary construction, as well as the relationship between openness and closedness, are essential to consider in the diverse ways invoked in this volume. Thus, we recognize that systems are not open or closed, as absolutes, but that that very idea is contingent upon the kind of operation or relationship we are considering – open to energy, but closed to organization, perhaps, which is at the heart of ideas of autopoiesis.

We have themes of complexity (what are the networks of interconnection, and when are they, and what are the opportunities afforded by understanding how complexity “works”), of undecidability (what are judgment-making processes and how are these interwoven with our ways of dealing with and embracing uncertainty), of modes of collaboration (how do we forge ways of knowing and doing together, that open up space for emergence), of paradox (how do we recognize when our worlds collide – and how that opens up opportunity for reflection on the very basis of frames for those worlds), and of the deeply epistemological concerns of constructivism (how do we individually and collectively come to create world(s) from our experience and come to “know” our world(s) as participants).

And then what happens when we consider all of these themes as a whole system of concepts - inter-related, an ecology of ideas, in Geoffrey Vickers’ sense. Looking at the interrelated themes of this book as an ecology of ideas, we might ask – What does it mean to understand managing from the point of view of complexity AND what does it mean to understand complexity from the point of view of managing?

Underscoring all of this is that woven throughout is the distinction between, and the relationship between, first order and second order cybernetics. We have concerns of our observed worlds (first order) folded into how we as observers are part of that which we are observing – what Heinz von Foerster so cleverly referred to as Observing Systems (second order). This distinction/relationship couplet invokes a management cybernetics that immediately becomes a reflective and collaborative practice. The different authors have different takes on precisely how, and when, this plays out – but, again, that is what makes the Unity-in-Diversity theme so appealing, as, from the introduction on through the entire volume, we are invited to appreciate what we see through our lens (whether the lens be a paradigmatic or an everyday frame lens), while at the same time recognizing what our lens allows us to see AND what it obscures.

We might even, then, in linking systems theory and cybernetics to managing, as this volume does, become aware of the very metaphors we use for knowledge creating processes in organizations. Anne Salmond, in writing about cross-cultural conceptions of knowledge, notes the difference between landscape metaphors of knowledge (which perhaps our idea of a “lens” invites) and which also implies having “perspectives” of a ground that is inexhaustible, with Maori metaphors of knowledge that speak to its exhaustibleness and destructibility. What are the consequences of the metaphors we rely on – which brings us back nicely to Gordon Pask’s cybernetics as the art and science of manipulating defensible metaphors.

One final question we might ask of ourselves in reading this book is what are the consequences of our particular “lens” and, at another level, the consequences of relying on “seeing” as a path to managing knowing.

This is book that asks us to ask such questions about how we think and act in working with others.

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