

# Meta-intelligence for analyses, decisions, policy, and action: The Integral Process for Working on Complex Issues

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“Children, clean up your mess!” If only the public messes we have made as adults were as easy to clean up as our childish messes were. Instead, we need to investigate, analyze, legislate, negotiate, decide, learn, train, supervise, and otherwise roll up our sleeves to tackle our tangle of messy social, political, economic, and environmental conditions.

It required no intelligence for us to make these collective messes. It requires meta-intelligence to know how to clean them up, and to actually do so. Whether we work in international agencies, governments, think tanks, corporations, NGOs, education, activism, or our own communities, to make long-lasting *positive* changes demands a particular kind of meta-intelligence. My research suggests we can scaffold, co-construct, and deploy collective meta-intelligence *while* and *by* working on complex issues. I posit that a particular range of structured methods are required to achieve results that address complex issues systemically with the requisite meta-intelligence. This chapter introduces a new paradigm for doing just that.

About 20 years of my theoretical and action research, in tandem with analyzing countless issues, suggest practical reasons to distinguish *working on* complex issues from *solving* them. The difference is between pragmatism and idealism. The title of the transportable, scalable process I developed reflects that. The acronym *TIP* is the short handle for the long title, *The Integral Process for Working on Complex Issues*.<sup>2</sup> While I occasionally enjoy word play with *TIP* as code for *tipping point*, it is wiser to resist such illusions. There are no magic bullets—not even *TIP*-tipped ones—that will ever make it quick and easy to work on local, regional, national, international, and global issues...much less the whole cloth they weave.

The purpose of this chapter is to serve as a brief primer for the idea of meta-intelligence, using an integration of selected theory, analysis, and innovative praxis. There are three goals. The first is to define some terms and offer some key concepts. The second is to answer the question, What is the meta problem? The third is to answer the question, Why do I think *TIP* is critical to offset the meta problem with meta-intelligence?

## Defining Terms and Introducing Key Concepts

My analyses indicate that identical terms can be used by people to mean quite different things.<sup>3</sup> This occurs routinely, though mostly unnoticed. Thus, I start by defining how I use key terms, beginning with those in *TIP*'s title. *Integral* is used in the classic dictionary sense,

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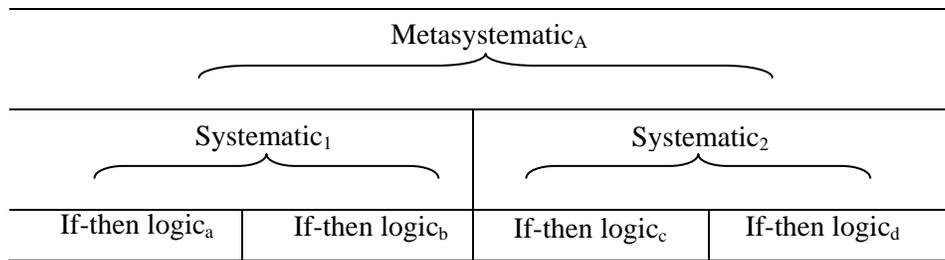
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<sup>2</sup> *The Integral Process for Working on Complex Issues*<sup>TM</sup> is trademarked and published by ARINA, Inc.

<sup>3</sup> See Ross, S. N. (in press). The challenges of postformal (mis)communications: Speaking different languages. Special issue on Postformal Thought and Hierarchical Complexity. *World Futures: Journal of General Evolution*, 65.

“essential to completeness,” to indicate both analytical and practical comprehensiveness. *Process* means “multiple steps and methods” as well as the progressive individual and collective “transition processes” in thinking, perspective-taking, analyses, syntheses, and motivations that naturally emerge through the steps. *Complex issues* refers to anything, anywhere, that we have on our myriad lists of public concerns. Whether climate change, terrorism, poverty, or a local shortage of affordable housing or good schools, such complex issues are essentially “disputes about our ways of relating.”<sup>4</sup> From the local to the global, such disputes about how we should relate to one another involve social, political, economic, and ecological “complexes:” nested layers of issues that exist at multiple scales.

When I have heard *meta* used, it is often a loosely-applied concept. For reasons I aim to make clear, I use the concept in a particular way, with a theoretical basis that gives it a technical meaning. This enables precision and analytical utility. In my usage of it here, I refer to metasystematic, nonlinear coordinations of at least two sets of systematically-organized information.<sup>5</sup> A set of systematically-organized information represents a complex conceptual system. A complex conceptual system nonlinearly coordinates at least two sets of formal (i.e., if-then or empirical) logics. As a result, systematic conceptual systems are one layer more complex than the if-then logics often used to explain things. Thus, as used here, *meta* indicates a concept two layers more complex than those conceived at the level of if-then logics (Figure 1).



**Figure 1: Layers of Conceptual Complexity**

What makes this use of *meta* relevant? Metasystematic reasoning is not only more comprehensive by virtue of nonlinearly coordinating widely disparate, boundary-spanning information and competing perspectives. It is also the means by which numerous higher-order principles are formulated and applied in context. These, in turn, guide analyses and methods as well as wise decisions, policy, and action. Comprehensiveness and higher-order principles are two dimensions of meta-intelligence needed to address 21<sup>st</sup> Century issues.

In this essay, I pair this technical meaning of *meta* with *approaches*, *problem*, and *intelligence*. Meta-intelligence underlies meta-approaches. Every thinking person is probably adverse to partial, band-aid policy approaches to complex issues. In practice, it seems to be only in 20/20 hindsight that policies are recognized as the ill-conceived band-aids they always were—whether wars on poverty, drugs, or terrorism, or numerous other intended social reforms. I propose that we can no longer delude ourselves about our delusional band-aid approaches. The strongest normative argument for adopting meta-approaches is that we have managed to ratchet

<sup>4</sup> Steve Chilton, July 22, 2006, personal communication.

<sup>5</sup> Commons, M. L., Trudeau, E. J., Stein, S. A., Richards, F. A., & Krause, S. R. (1998). The existence of developmental stages as shown by the hierarchical complexity of tasks. *Developmental Review*, 8(3). 237-278.

up the stakes to the point where the quality of life—if not survival—of innumerable more people and ecosystems are jeopardized. We cannot afford to *not* invest in meta-approaches.

If that is the case, then what do meta-approaches to complex issues look like? An “approach” may refer to analyses just as much as it may refer to policy-making, decision-making processes, and collective public action. These display infinite variety when it comes to their specifics. However, when it comes to the comprehensive<sup>6</sup> structure or “container” of the approach, such features as the following are discernible.<sup>7</sup>

- They require more time, information, people, and analysis.
- They integrate knowledge of formal *and informal* social, political, and economic institutions when these are relevant to the issue (almost always).
- Their integral scope prevents “technical” problems from being regarded as *only* technical and therefore needing only expert technical fixes.
- They construct a non-partisan, non-parochial meta-analysis to ensure an integral scope, not governed by one ideology, diagnosis, or preferred solution.
- They ensure that all determinable perspectives, needs, and pre-existing conditions of stakeholders, at all scales, have been systematically incorporated during assessment of both causation and potential changes’ short- and long-term impacts.
- They use deliberation in a systematic fashion to weigh, juxtapose, and coordinate all perspectives, needs, and conditions under different scenarios in order to construct meta-combinations of multilateral action tailored to the different scales embedded within the problem being addressed.
- They rely on more dimensions than policy alone to implement changes.
- They are processual and embed regular critical reflection, deliberative action inquiry, evaluation, and adjustment.

Meta-approaches, then, institutionalize awareness of deeply-systemic complexity and methods to deal with it. One might assume they seem slow and arduous compared to business as usual; thus, quick-fix conventional approaches may have more initial appeal. It would be unwise, however, to underestimate the potentially transformative insights and motivations and the long-lasting social, political, and knowledge-building capital inherent in meta-approaches and their principles and processes.

Since complex issues have increased and deepened over time, dissolving their causes and impacts will likewise take time. Indeed, we are long overdue to invest in doing so. When we do, policies and activities of far more substance and systemic impact can go faster, wider, and deeper to launch and sustain systemic change. *The fact that humans do not yet employ meta-approaches to address such issues indicates a meta problem.*

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<sup>6</sup> Comprehensiveness can be assessed analytically using TIP and subjected to validated quantitative measurement. For the latter, see Commons, M. L., Goodheart, E. A., Pekker, A., Dawson, T. L., Draney, K., & Adams, K. M. (2007). Using Rasch scaled stage scores to validate orders of hierarchical complexity of balance beam task sequences. In E. V. Smith, Jr. & R. M. Smith (Eds.). *Rasch Measurement: Advanced and Specialized Applications* (pp. 121-147). Maple Grove, MN: JAM Press.

<sup>7</sup> These are introduced only briefly due to space limitations. Further discussion is available in TIP and other sources cited herein.

It is possible that a broad survey to ask what is the big problem and the best solution for fixing public issues in general would indicate some common ground akin to this: Policymakers do not listen to people, and they are often biased or bought. Policies are half-baked and unfair to certain constituencies. Policies to fix one thing here cause other problems there. The solution is to listen to people and use their collective intelligence to make wiser policy.

If only it were that simple. My analyses suggest it is not. Rather, I detect a meta problem of many dimensions. Several of those are briefly introduced here.<sup>8</sup>

1. The inherent nature of *all* complex public issues continues to go unrecognized. Two key indicators are the rampant, unexamined assumptions (a) that policy is sufficient to both force and manage change (e.g., “If they are doing this, then we will punish them or make them do that.”) and (b) that entire populations do not have hands-on, substantive roles in addressing their issues. Voting does not count; it is an insubstantial, hands-off role (e.g., “I/we vote for you because you promise to fix problems for us. If you do not, I/we will not vote for you again.”).
2. We are ignorant about how and why invisible lattice-works of informal social, political, and economic “stakeholder relations” operate, both behind the scenes of public facades and right under our noses, and how and why they consistently thwart change-efforts designed without this knowledge.
3. Our public issues-talk is typified by opinions, assertions, biases, simplistic diagnoses, fact-wars, blaming, and other habits that cast doubt on how much collective intelligence we have to offer. For example, we do poorly at evaluating whether reasoning—our own or others’—is internally consistent and how much (if any) of an issue’s complex causation it recognizes.
4. Many are impatient with, confused by, or dismissive of analyses that are more complex and contextually nuanced than solutions-talk based on slogans and slick logics.
5. Adult perspective-taking skills—e.g., flexibility to suspend judgments at least long enough to hypothetically walk in diverse others’ shoes—are seriously underdeveloped and no culture on Earth yet supports their development.

The meta problem partially represented by these dimensions cannot be reduced to one label that describes an “it” for us to solve. It does, however, indicate that our evolution as a species of thinking, social beings has not yet come to the stage of manifesting much meta-intelligence. Our collective futures hinge on developing such intelligence and bringing it to bear on a wide and growing array of deadly serious issues. How might we start to get “there”?

### **Why I Think *TIP* is Critical to Provide a Meta-Intelligence Off-Set**

Over the last two decades I have repeated the mantra that if it were easy to address complex issues, we would already have done it. My analyses suggest we do not know *how*. I believe *TIP*, as a theory-and-research-based meta-approach, offers a powerful *how*. Its role in offsetting the meta problem is to provide the necessary structure and methods for working on complex issues. It eliminates the need to reinvent the wheels of analysis and method for each distinct issue: its universality makes it applicable to all issues.

We have analogies for this kind of structural universality that eliminates reinventing wheels. Numerous mathematical formulas have been invented to solve complex physics and other

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<sup>8</sup> See writings listed at the end of this chapter for more discussion.

problems. Once a formula is invented and proven, users can insert their own content-matter (e.g., measurements) and go through the steps that result in an answer. *TIP* is like a public formula: a content-free structure in which users’ information is processed to produce more complex information, policy, decisions, behaviors...and intelligence.

While public issues always have messy dimensions, their inherent complexity need not stymie work on them. I believe one advantage of *TIP* is that it de-mystifies a great deal of public complexity. The troublesome aspects of social, political, and economic complexity—which *we* collectively created over time—are quite susceptible to analytical clarity about what *we* do and do not do at various scales, individually and collectively, and *why* we do and do not do things. We “merely” need methodical processes to (a) help us tease apart such constituent elements, their relationships, and their interactive dynamics and then (b) guide our productive use of all that co-constructed knowledge. These steps (Table 1) eliminate a great deal of mystery about such complexity by unpacking, classifying, and working with its roots.

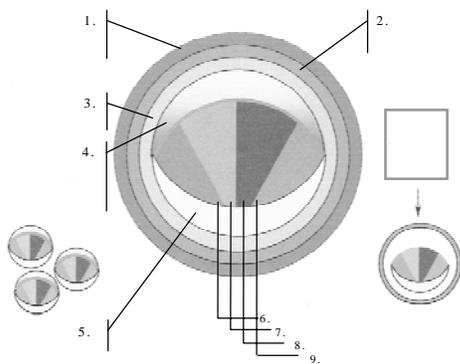
<b>TIP Step</b>	<b>Purpose</b>	<b>Product or Outcome</b>
1	Develop informed basis to select starting point(s)	Map of the territory.
2	Surface & deliberate differing assumptions that could later confuse or create conflicts.	Alignment toward the goal with clarity about differences.
3	Identify factors of complex causation.	Summary Description of the Issue.
4	Recognize comprehensiveness of action required & what to include.	An “action-system” i.e., a systemic to-do list.
5	Develop the reasoning behind a selected Issue-Question.	A specific question needing deliberative decision-making
6	Expose the array of approaches to the Issue-Question that are driven by different perspectives on it.	Framework of Approaches via template assuring all perspectives are included.
7	Create an informed basis for complex decisions.	Deliberation; Decision Matrix; Decision-making.
8	Assure coordination.	Communication/feedback loops.
9	Effective systemic action, change, or development.	Institutionalization to sustain effort.

**Table 1: Outline of TIP Steps**

Regardless of the institutional or public venues in which its iterations are used (with a trained analyst or facilitator involved), *TIP* deploys a number of interactive dynamics of human development itself to iteratively accomplish the tasks necessary to address public issues. The

tasks become increasingly complex (e.g., Figure 1), each one a building block the next tasks depend upon. They proceed to the meta level where multiple systems of complex action may be coordinated. Modularity enables considerable flexibility and tailoring, including who is involved, when, and for what practical or political purposes (Figure 2, below).

When numerous efforts to address issues are coordinated and interconnected, a massive web of meta-intelligence-moved-to-action is possible. Such a process can be used for analysis, policy development, and general problem-finding, decision-making, evaluative reflection, and self-motivated action to change behaviors, policies, and priorities multilaterally. My theory is that when approaches use the progressive, dialectically-nonlinear dynamics of development itself to scaffold meta-intelligent reasoning—and more competent ways of relating on the issues that are worked on—adult, social, and political development can be fostered because the natural steps are embedded in the process itself.



**Figure 2: The metasystem of TIP steps & modules**

This underlies my hypothesis that meta-intelligence can be fostered *while* and *by* addressing complex issues. This paradigm may be the most pragmatic, comprehensive, scalable, and hopeful approach to offset the meta problem we inhabit in the 21<sup>st</sup> century.

My most passionate commitment and vision is that meta approaches such as *TIP* become the norm—sooner rather than later—for how we address our local, regional, national, international, and global issues *and* how we come to recognize the whole cloth they weave. We *must* galvanize ourselves and populations planet-wide with productive methods to build capacities and political will alongside new priorities and reasons for hope and motivation to change many of our current habits, both individual and collective.

Somewhere on a crashed computer disk is a detailed outline of a multi-scaled, international project I designed some years ago to test some of my conceptual models. It was to tackle a NAFTA-related question of significance. By assuming *TIP* methods, I could map a sophisticated structure to develop, and react and respond to, whatever layers of issue-content countries’ citizens (including corporate ones) and officials might identify and need to address from their disparate perspectives and self-interests. It built in feedback mechanisms to clarify, refine, and deliberate component issues up, down, and across all scales. This model captured my vision for boundary-crossing development of meta-intelligence *while* and *by* addressing vital issues. Such a model needs integrated computerized support ranging from GIS to new applications designed for transparent, world-wide issue-mapping, analyses, framing, and deliberation as well as for disseminating meta-intelligence-based best practices, policies, and systemic public action. Meta-approaches to construct horizontal and vertical connections from local to global scales, *issue by issue*—while yet only a vision—are possible, necessary, and perhaps our non-negotiable future.

This is a crucial agenda. We must create venues to develop meta-intelligent competencies and invest *now* in meta-approaches to clean up our adult messes. When we do, we may then see meta-intelligent priorities begin to transform our habits and politics, our institutional arrangements, and all else we must do to support life on this planet beyond the 21<sup>st</sup> Century.

**Selected works by this author related to this subject**

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