

Fix management, to fix organizations, to fix the planet ^{1, 2}

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ABSTRACT

The basic idea of traditional management is that each organization, in line with its capabilities, seeks to transform a set of inputs into selected outputs in an efficient manner. Over time, the traditional approach has been the basis for a vast constellation of organizations within the world economy. But the downside of the traditional approach is in full view today because natural systems are significantly degraded as the tragedy of the global commons is writ large, and workers have little motivation or agency to engage in fixing these external issues. When efficiency is the highest good sought by each organization, the approach is extractive, and the surrounding environment suffers. The contribution of greenhouse gases to climate instability is only one example illustrating that the current course is unsustainable. The traditional approach to management is degrading the health of the environment because each individual organization has little concern for its net external effect. The fault is in the traditional input-to-output model that views efficiency as the highest good. Fortunately, the traditional approach is socially constructed and can be changed if we are willing. This paper offers a new input-to-outcome model that: (a) serves to stabilize the health of an organization and its environment as an integrated system, (b) values ‘positive effectiveness’ as the highest good, and (c) engages stakeholders fully in the work. The approach can be used both in temporary organizations (such as projects or programs) or permanent organizations (such as businesses, government agencies, or non-profits).

LINKING MANAGEMENT, ORGANIZATIONS, AND PLANET

The paper explores the linkage between the practice of management, the behavior of organizations, and the health of the planet. The paper posits that the constellation of organizations operating across the planet are the primary drivers of planetary ill health, and that underlying the behavior of organizations is the philosophy, theory, and practice

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of management. The paper points out simplistic assumptions in traditional management practice that drive dysfunctional approaches in organizational systems, leading to negative effects throughout organizations as well as planetary regimes. At a time when the world seems to be spiraling out of control in so many ways, we need a new form of management to help stabilize and repair organizational systems, from local to planetary scale.

It is a simple idea: the way individual organizations are managed is driving the results being seen over time in ever larger organizational systems, including those of planetary scale. If we fix the driver of these results, the results can be different. This can be a very good thing if our approach is sound. The new approach needs to be compatible with the realities of the real world where organizational systems are complex, intertwined, and interdependent. It also must recognize that significant time lags are present in the propagation of large-scale system drivers, making causality difficult to investigate. What seems relatively clear, however, is that if we do not fix management, we cannot fix organizations, and we cannot fix the planet.

MANAGEMENT AS COGNITIVE TECHNOLOGY

To get started, consider what management is about. At its core, management is a cognitive technology. It provides the cognition that drives action within a cooperative endeavor (i.e., an organization, after Barnard [1938]). In referring to cognitive technology I rely on a general dictionary definition, where cognition refers to mental processes that involve thinking or reasoning.

In organizations, individuals may join together to pursue collective aims, but until organized, there is no way to make decisions -- no single mind to set the course. Instead, many minds pull in many directions, each belonging to an individual or sub-component within the whole. Management science must provide the cognitive technology. It asks the collective 'we', "where are we now?"; "where do we intend to go?"; "how do we get there?"; and "how are we doing?" Despite myriad complaints about bureaucracy, the basic reason organizations write reports and have meetings is to make sense of the current situation in order to move forward, hopefully with one mind. Unfortunately, the cognitive technology found in traditional management does not work well for us today due to its simplistic assumptions and a continuing fixation on efficiency. I have called the current regime "the age of efficiencyism" (Chandler, 2017).

This paper is being presented at a conference on project management. As managers, we have a seat (front and center) on what is happening in the world around us; but we must successfully interpret what we are seeing in order to move forward. Let me submit that

success in organizational cognition depends upon our focus. Most organizations are focused on what is right in front of them, related to what they are doing internally (a focus on the efficient conversion of *inputs* to *outputs*). This is what traditional management is about. But if we switch to an external frame, it becomes important to understand the response of the adjacent environment to what we are doing now (a focus on *outcomes*). Even broader, with a long-term horizon, we must focus on the effects that will be propagated over a number of years in response to what we (along with others) are doing now (an *impact* focus). The basic cognitive task of management is to make sense of the situation, determine where to focus action, and what to count as success.

Let me illustrate. Imagine that I am holding a small blue ball in my hand. Think of it as an organization. It may be a temporary organization (project / program) or a permanent organization (business, government, nonprofit)³. Traditional management is concerned primarily with what happens inside the ball (i.e., within the ‘boundary’ of the organizational entity). But outside and surrounding the ball is an adjacent environment. If management is concerned only with what happens inside the organization, its approach to cognition falls short. In the real world, an organizational boundary is less than solid, and an organization interacts in significant ways with its adjacent environment (e.g., to induce favorable responses from actors in the environment). Organizations that survive and thrive seem to establish a form of symbiotic integration and trust with their environment, thus creating a living organization-environment system. A new approach to management needs to provide cognition to inform initiatives throughout the organization-environment system.

COGNITION THROUGH NARRATIVE

Throughout the history of management, cognition within organizations has been constructed through narrative. Since traditional management has focused on what happens inside the organization (converting inputs to outputs), its cognition has centered primarily on *input & output* narratives. However, to supply cognition throughout the organization-environment system we need to add two additional narratives -- *outcome*, and *impact*. As we will show, the additional narratives offer remarkably important cognition outside the organization as the environment responds to what is on offer. Our four-part categorization of narrative types follows the tradition of the logical framework at the heart of results management (Asian Development Bank, 2006), a framework that dates back to the late 1960’s in the US government (Smith, K., 2013). While results management has been used widely in international development projects and programs financed by donor agencies, it has not been applied widely to organizations more generally.

³ The illustration also applies to sub-organizational levels (individuals, teams, units, departments) and supra-organizational levels (organizations working together).

Since traditional management is concerned with input to output conversion, cognition inside the organization has privileged efficiency. Improving efficiency is a matter of increasing output per unit of input, for which many techniques have been developed over the years. The focus on efficiency was given a significant boost from the ‘scientific management’ movement of the early 20th Century by Frederick Winslow Taylor (Taylor, 1911). His approach was ‘scientific’ only in a rather narrow sense. In a given situation, it provided an approach to improve the internal efficiency of input to output conversion (a production process) to achieve Taylor’s “one best way.” Before moving on, let’s consider the 4 narrative types needed for cognition throughout the organization-environment system in more detail.

Input narrative. The oldest and traditionally dominant narrative surrounding organizational cognition has been the input narrative. The input narrative focuses on financial management and is based on the practice of accounting. Accounting provides a narrative surrounding the *inputs* (e.g., capital) provided to the organization and what happens to the inputs over time (e.g., an increase through profit making activities). This tradition was documented by Luca Pacioli, an Italian mathematician, who wrote the first text on double-entry bookkeeping in 1495. Double-entry bookkeeping was the secret sauce of management that Venetian merchants used during the Italian Renaissance, revolutionizing how businesses improved the efficiency and profitability of their far-flung operations. The principles of accounting described by Pacioli have remained largely unchanged over the last 500+ years. Input narratives derived from financial management through accounting largely provide a view through the rear-view mirror, however, and the narrative has limited usefulness for management decision support because of the lagging and aggregated nature of its indicators. The financial performance described in the accountant’s books for the current quarter result from activities that occurred in the past.

Output narrative. Output narratives focus on the efficiency of the organization’s various internal operations, notably the transformation of inputs to outputs through one or more processes. These processes typically gain efficiency by the use of specific technologies, where cognition is grounded in evolving (‘scientific’) bodies of knowledge. The outputs of a typical organization are identified as a portfolio of products, services, or capabilities that the organization offers to its adjacent environment -- where its customers or end-users live. High efficiency is achieved by isolating a part of the organization from outside influences, such as in a dedicated factory facility or a shop floor (after Taylor, 1911).

Many of the well-known management techniques, such as management by objectives, reengineering, Six Sigma, agile teams and OKRs are primarily about output management through improvements in process standards and efficiency. Unfortunately, efficiency improvements realized in specific production processes are *not* additive across a portfolio of offerings and thus do not translate proportionally to the organization as a whole. Output narratives offer cognition surrounding internal quality and efficiency. In traditional

management, the organization's outputs are assumed to be dispersed to the environment by the internal processes of marketing and sales (i.e., pushed out).

Outcome narrative. Outcome narratives focus on the response of the environment and its embedded actors to the various outputs (products, services, or capabilities) that the organization offers. Outcome narratives focus on the demand-side, describing the *pull* from actors in the environment with respect to an organization's specific offerings. Outcomes are observed and documented in real time for each offering through the behaviors of uptake, adoption, or use initiated by actors in the environment. Outcome narratives provide a high level of cognition surrounding the effectiveness of the organization within its environment. This is where the value propositions designated by the organization as offerings (i.e., outputs) are converted into outcome benefits in real time within the adjacent environment. Outcome benefits⁴ can be tabulated for each offering and are additive across a portfolio of offerings to inform outcome narratives.

Impact narrative. Impact narratives focus on the spread effects that occur in the environment when outcome benefits continue to be generated in the environment over longer periods of time (generally on the order of 5 years). For example, spread effects might result in brand-building in a business enterprise. Positive impact narratives often reflect the emergence of symbiotic integration and trust within the organization-environment system over time.

THE POWER OF NARRATIVE SIMILITUDE

In searching for a management approach that provides a high level of cognition throughout an organization-environment system (and, by extension, in networks of systems), we can enlist the power of narrative as described above. Yet we can limit our attention (as needed) to any sub-part of interest thanks to narrative similitude within organization-environment systems. For example, among sub-organizational forms we could enumerate organization-environment systems by listing the individual/team system, the team/unit system, the department/whole-organization system. Among supra-organizational forms we may find larger systems made up, for instance, of a single organization and an adjacent environment populated by its trade group.

The four narratives outlined above (input, output, outcome, and impact) offer a complete "narrative stack" to investigate and describe the performance of any organizational unit and its adjacent environment as a system. Real time management decision support within the system is provided by the outcome narrative (external effectiveness), followed by the output and input narratives (internal efficiency). Further, mature organizations can use an impact narrative to inform stakeholders (both internal & external) regarding the growth of organizational effectiveness and its impact over time. A narrative stack offers a convincing

⁴ I have described various types of outcome benefits elsewhere (Chandler, 2017: 90).

way to populate the organization's story with evidence-based detail. The most meaningful narrative for cognition is the outcome level because it is the primary level where benefits are exchanged with the environment in real time, but all 4 levels of the narrative stack can add important details to the organization's overall story.

WHAT'S WRONG WITH TRADITIONAL MANAGEMENT?

Traditional management is so familiar that it is hard for most people to conceive of anything else. In traditional management, the executive levels of the organization provide cognition and send directives to lower levels for action. Yet there is nothing in management theory that says that an effective organization must conform to the dictates, or goals, of the top-level executives with authority. Goals set by the C-suite are often self-serving and simply make the organization responsible to the C-suite for its approval rather than to the customers or end users that must support the organization and supply the reason for its existence.

When higher levels of management provide directives to the lower levels, individual workers lose agency to address the real problems that they see in their day-to-day work. It should be no surprise that Gallup reports only 2 in 10 employees strongly agree that they are managed in a way that motivates them to do outstanding work.

I have discussed the characteristics and short comings of traditional management elsewhere (Chandler, 2019). Briefly, its characteristics are as follows:

- Top down, command & control [originally designed for repetitive manual work]
- Objectives focused primarily on output production and cascaded down from the top of the hierarchy to the lower levels
- Largely authoritarian & bureaucratic in nature
- Efficiency is the highest good (an isolated and largely closed system)
- Input – output model (organization centric), within management's full control
- Requires objectives to be 'clear,' but virtually any objective is acceptable
- Positive values are largely optional (little self-regulation)
- Intermediation services (balancing supply & demand) are performed by 'the market' utilizing financial & economic benefit exchanges between relevant actors
- Waste products are returned to the environment

Perhaps the largest drawback is that traditional management practice focuses on how well the organization is doing *for itself*. There is no mandate for an organization to serve its environment to further the common good represented by the organization-environment system. Cognition in traditional management makes use of the first two levels of narrative only (input and output). This limits the cognitive potential of traditional management from the start.

Let me offer a story that illustrates how cognition in traditional management is often constrained. In the 1980's, I found myself in New Delhi, India, working for the World Health Organization (WHO) in its regional office for SE Asia. It was during the UN Water Decade (1981-1990). I was the project manager for the UN Water Decade's Advisory Services Project (one of a few efforts to monitor the Decade from the field). My job was to work with governments in the region to find out what was going right and what was going wrong with the Decade to inform the programs of participating governments in South Asia and East Asia. The goal of the UN Water Decade was to improve the 'coverage' of safe water supply and adequate sanitation in participating countries. But 'coverage' was an unfortunate choice for the goal because it is an *output-focused* goal. The Decade became a game of numbers, driven by coverage targets. Governments believed they just needed more resources to be successful. But existing facilities were frequently broken, and many were not used for their intended purposes (for a variety of reasons). Producing outputs (to improve 'coverage') can be a never-ending treadmill. In the absence of local ownership, the more handpumps and latrines built by government agencies, the more that end up lying broken or unused in the field. WHO came to believe that 'coverage' was not enough for meaningful success. Success was about something else (outside of management's direct control). In fact, without proper adoption and use by the adjacent environment, program outputs are largely waste.

When management is focused on output production, the prime directive is efficiency. It's about getting the most output for the least input. The focus on efficiency is a feature that was inherent in output production from the beginning of management and has not been corrected since. For instance, this problem can be found in the work of Frederick Winslow Taylor (1911) and Peter Drucker (1954), as well as more recent approaches such as John Doerr's "objectives & key results," or OKRs (2018). Outputs are not meaningful in themselves because they do not document benefit exchanges with the environment. Better management cognition is provided by the documentation of meaningful outcomes -- observing the behaviors of uptake, adoption, or use (of outputs) by relevant actors in the environment.

MANAGING FOR MEANINGFUL OUTCOMES

I have called the new approach to fix management, "managing for meaningful outcomes"⁵ (Chandler, 2019). 'Meaningful' refers to relevant positive effects that can be observed in the field to serve as markers for the types of outcomes that are sought. 'Outcome', although a common English word, has two, somewhat different meanings. One is "the final result, or how a thing turns out." This is not the one I am using. Another meaning of outcome is an effect caused by an antecedent stimulus. It is this one that is useful for this discussion, an effect caused by something that logically precedes it. Meaningful outcomes are verified by the observation of the behaviors of uptake, adoption or use by

⁵ I have also used its more formal title, Management by Positive Organizational Effectiveness (Chandler, 2017).

demand-side actors in response to the outputs. They are also meaningful because they signify real time benefit exchanges between the organization and its environment.

When managing for meaningful outcomes, the meta-goal (i.e., purpose) of the organization is to be effective within its environment, and to maintain effectiveness over time as the environment changes. The approach has the following key features and characteristics (Chandler, 2019):

- Meaningful outcomes are achieved in the environment surrounding the organization (using specific behavioral markers for effectiveness)
- The environment is assumed to be complex at the start, thus causality may be unpredictable & intertwined (results chains involve conjecture)
- Managing for meaningful outcomes is about inducing favorable effects in a system not under management control
- Involves self-regulation of processes in order to uphold positive organizational values and reduce or eliminate negative side-effects
- Intermediation services (which balance supply & demand) are performed by ‘the environment’ (including ‘the market’) utilizing a variety of benefit exchanges (financial & economic, social & psychological, environmental & spiritual) between relevant actors
- Adopting this new management approach requires a major cultural shift to an experimental, self-regulatory, and adaptive culture

Let me illustrate the power of an outcome narrative from a program that I helped design for the World Bank. Bird Flu is a disease that occurs periodically in many parts of the world. To control the disease, it is necessary to understand how it spreads and then interrupt its transmission. Outbreaks of the disease generally occur when wild flocks of birds (the reservoir for the disease) migrate between the northern & southern hemispheres during the spring & fall seasons. The program in my example adopted the goal of maintaining separation between the wild migrating flocks and domestic poultry during the migration seasons so that outbreaks could not occur. This is a meaningful outcome because program success required domestic poultry producers (in the environment) to adopt and use the program’s offered strategies for the physical separation of wild and domestic birds.

The Avian influenza virus can also be transmitted to humans, so precautions are necessary. When intervention teams go to the field and observe that separation methods have been adopted and are being used by the domestic poultry producers, transmission of the virus between wild flocks and domestic poultry is being interrupted. The expected

result is that outbreaks of Bird Flu do not occur. The approach was successfully applied in several countries of East and South Asia.

SURVIVAL OF THE EFFECTIVE

When an organization is managed so that organizational effectiveness becomes the highest good, employees are set free to contribute to the outcome narrative within the environment. This improves worker engagement because they gain agency to address any larger problems of society that they may see around them through their work. In addition, trust within the organization rises because managers are no longer free to cut employees to serve the lesser goal of efficiency improvement. An outcome-focused organization needs creative employees that innovate so that expected outcomes can be achieved and maintained in the changing external environment. For the organization, it's about using positive values to serve its environment and gaining rewards in return (through benefit exchanges).

On the other hand, if an organization adopts negative values and abusive practices toward its surrounding environment, actors in the environment begin to question the organization's legitimacy. In some cases, authorities may be activated to eliminate bad actors. Lessons have emerged in recent decades from the scandals of Enron, WorldCom, VW, and Wells Fargo -- to name a few. The environment seems to exert a form of selection pressure to encourage the survival of effective organizations with positive values, while serving to discipline or eliminate bad actors over time (once they are widely known).

IMPLICATIONS OF THE NEW APPROACH

What can you do with the new approach? You can manage a portfolio of initiatives in any organization-environment system, from local to global scale. Observation of demand-side outcomes for each initiative is the most meaningful way to facilitate cognition for management decision support. When judging whether meaningful outcomes have been achieved in an organization (including sub- and supra-organizational units), consider whether the organization's outputs are being adopted and used for the purposes intended (without loss, the need for rework, or complaint) by those in the environment who require them as inputs to their own processes (i.e., "lives"). Where the organization falls short would indicate areas for improvement.

This is evidence-based management for the real world. We have gone beyond the search for efficiency on Taylor's shop floor. When managing for meaningful outcomes, workers use not only their hands, but their minds as well. Both manual workers & knowledge workers are welcome to join in. Innovation is now released in the workforce, whereas it was held captive by controls cascaded down from above – its cognition focused on input-to-output conversion.

Today, it is easy to believe that the world is spinning out of control due to its expanding complexity and the lack of moderating factors to adequately dampen negative effects. The first law of cybernetics (Ashby's law of requisite variety) states that to successfully control a system, the control technology must be able to address the full variety of states found in the system. The traditional 2-part input-output model offers no meaningful support for system control beyond the boundaries of the organization. It relies simply on input & output narratives for management cognition, while any broader system-wide discipline is assumed to be exercised by the 'invisible hand' of market forces. With its focus on efficiency, traditional management treats human labor as a cost to be minimized and remains blind to the health of the surrounding environment because it ignores negative externalities (unless regulated by government). It is traditional management practice that is linked to the imperiled world we now live in, from local to planetary scale.

SUMMARY & CONCLUSIONS

The paper has focused on the limited cognition available from traditional management and has suggested an alternative path forward. Of course, the traditional approach is not cast in stone. It is socially constructed. It can be changed if we are willing. As suggested here, the adoption of a better cognitive model for management could be the basis for more effective and trustworthy organizations. It could also help repair local environments and a damaged planet.

Our argument is that a focus on meaningful outcomes provides the most relevant context for cognition within the organizations found in an interconnected world. The traditional approach to management (still commonly in use) arises from a largely meaningless input-to-output model where *efficiency* is enshrined as the highest good. In such a model, the organization transforms inputs into a portfolio of outputs using nominally efficient processes, and assuming financial flows in return. The constructed narrative is about how well the organization is doing *for itself*. While this approach has been historically important, it generally fails to provide meaningful and timely evidence for management decision support outside the internal system. In addition, it largely ignores negative side-effects on internal actors and the environment. As long as efficiency is the highest good, the principles of humanistic management and environmental conservation will fall victim on the altar of efficiency. Unless changed, the traditional management model will continue to imperil the world in which we live.

Going forward, management technology needs to adopt a more meaningful input-to-outcome model that values positive organizational *effectiveness* as the highest good. This would provide meaningful and timely evidence for decision support within a portfolio of offerings, while providing guidance for sustaining or improving the health of the organization and its environment as a holistic system. In the new approach, an organization achieves effectiveness when its outputs induce meaningful outcomes in the adjacent environment. This approach offers demand-side validation of the efficacy of an

organization's portfolio of offerings (whether in business, government, or nonprofits) and thus provides verification of organizational effectiveness by direct observation in the field. This is the first approach to do so. Since the organization is seeking effectiveness through symbiotic integration and trust with its environment, its intentions toward the environment are positive, and are only realized by improving the common good of the organization-environment system. Positive organizational effectiveness offers a more meaningful technology for human accomplishment, a path to more effective and trustworthy organizations, and a chance for a better world.

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