#NewMacyMeetings Manifesto —
Conversations For Action[1]

Notes: No prior knowledge is assumed. A clean version of this without comments or suggestions is <u>available here</u>. A more concise argument is <u>being developed here</u>.

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[1] This initiative emerged in collaboration with the <u>American Society for Cybernetics</u> (ASC) and in conversations with a network of colleagues beginning in March 2020, from a proposal first set out in <u>this seminar talk</u> and <u>refined here</u>. The primary editor of this document is Paul Pangaro, President of the American Society for Cybernetics as of January 2021 and responsible for all errors and omissions. Many have contributed including but not limited to Peter Cariani, Jocelyn Chapman, Trilly Chatterjee, Jude Lombardi, Nga Ngyuen, Innocent Ndubuisi-Obi, Andy Pickering, BCE Scott, Fred Steier, Mark Sullivan, Ben Sweeting, Ensar Temizel, Guilherme Kujawski Ramos, Larry Richards, and George Wharton. For further information or to become involved, please write to <u>paul.pangaro@ asc-cybernetics.org</u>. *#NewMacy Meetings by Paul Pangaro et al is licensed under* <u>CC BY-NC-ND 4.0</u>.

Overview — Calling for "conversations for action"

"A is better off when B better off.
– Heinz von Foerster 1971

"B is better off when A is better off."
– Larry Richards 2020

The purpose of #NewMacy is to catalyze conversations across disciplines, geographies, and generations. Such scope is demanded in order to design actionable responses to any of the many great challenges of our time — pandemics of biology and technology, racism and inequality, environment and economics. These are all challenges that have run out of control, a consequence of interactions that ricochet through physical, biological, and social domains, reinforcing their own spirals while causing or accelerating others. These challenges are unpredictable and deeply destructive. We must accept that science, governance, social movements, technology, and design have failed to curtail them.

A primary example of such "wicked" challenges[2] is that of today's artificial intelligence systems, defined here as the powerful, ubiquitous tech platforms (such as Facebook, Google, Youtube, Amazon, Twitter) **that bend the thinking and the lives of billions of people every day.** Other AI-based systems (such as social credit scoring, facial recognition, and recidivism algorithms) impose social or racial bias, further oppressing those already victimized by economic inequality and systemic racism. **"Today's AI" determines so much of the world we see and the world we live in — a pandemic by definition.** "Pan" meaning "all", "demos" meaning "the people", pandemics are negative circumstances that affect an entire population.

The #NewMacy initiative calls for conversations interwoven with viable action that responds to today's wicked challenges. Intended outcomes from #NewMacy conversations include:
- Reframing of today's wicked challenges to clear paths to action, beginning with "Rethinking Today's AI"
- Progressing to related social, technical, and ecological topics and their intersection
- Evolving a shared understanding through systemic models and actionable plans that strive to mitigate negative effects
- Nourishing new generations of contributors across disciplines, geographies, cultures, socioeconomic status, gender, sexual identity, political leaning, race, ethnicity, and age
- Connecting with organizations and individuals who are current participants in a given domain and therefore in a position to bring about change
- Harnessing of existing communities of practice while generating new ones
- Producing design patterns, case studies, and workshop kits, offered as open-source and widely shared to encourage active learning.

The purpose of this document is to seek the participation of individuals and organizations in the #NewMacy initiative.

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[2] In this document "wicked" problems or challenges are meant in the strict sense of Rittel and Webber 1973 who characterized them by a list of confounding attributes such as their lack of clear definition, impossibility to ultimately be "solved" but only mitigated, the unpredictable influences across system elements, and so on. As a result, the path to action requires framing situations in a way that leads to agreement and cooperation. More on this in later sections.

Why Cybernetics

"I could also say we are all cyberneticians (whether or not we call ourselves such) whenever we justify our actions without using the words 'because of…,' but with the phrase in English 'in order to…' "
— Heinz von Foerster 1991a

Drawing on insights about "purpose"

Founded in the 1940s, the field called Cybernetics arose before computer science or artificial intelligence. The cliché uses of the prefix "cyber" that are associated with domains such as robotics or security or the internet have caused widespread misunderstanding. Cybernetics both spans and enriches many disciplines including neurophysiology and biology, anthropology and psychiatry, social science and philosophy, architecture and design, electrical engineering and computer science. **Cybernetics was born of the revolutionary recognition that a broad array of systems — biological or mechanical, technical or social — can be understood as having purpose**.[3]

Prior to Cybernetics, purpose was treated with mystical intrigue, a quality granted by some external power (for example, God or Mother Nature). Cybernetics begins by observing that some systems use feedback to signal that a change of behavior is needed to maintain its purpose.[4] It is the mechanisms internal to the system that are responsible for it maintaining its purpose, not some mystical power.[5]

So, the starting point for studying these systems is to describe the structures and processes that constitute their mechanisms. Then if we have the best intentions, presumably we can understand what systems to build, or how to change existing systems, in order to achieve our desired outcomes? This is clearly not the case. So many wicked challenges emanate from appropriate, well-meaning, purposeful human action — because the *actual* outcomes from our actions get tangled in a highly complex web of systems where unpredictable reactions ricochet and provoke unintended consequences. Industrial-age progress brings climate change, convenient plastics choke our oceans, police funding ignites racial injustice, personal devices allow "surveillance capitalism"[6] — a few of many examples of purpose gone awry. We must think harder and be critical of the purposefulness in our actions.

Recently we are threatened by our own designing of technologies that have the capacity to pursue goals that we load into them. AI in autonomous flying weapons, facial recognition for collaring purported criminals, advice for putting lawbreakers back in jail, recommenders for

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[3] The purpose of the system is whatever it does. The purpose for a system is what we design it for or want it to do (Pask 1969). The role of goal/purpose in Cybernetics is deftly explored in Glanville 2004 and Sweeting 2017. Mary Catherine Bateson's *Our Own Metaphor (*Bateson 2004) probes the meaning of "conscious purpose" in a conference setting.

[4] The term "feedback" enters our modern vernacular due to the rise of Cybernetics.

[5] A system's purpose may be seen as maintaining stability, invariance, persistence, or equilibrium. From a technical perspective this behavior can be described as maintaining certain variables within limits.

[6] Coined in Zuboff 2019. See also her opinion piece, "You Are Now Remotely Controlled", New York Times, https://www.nytimes.com/2020/01/24/opinion/sunday/surveillance-capitalism.html.

what to buy and what to think. Whose goals are they — the algorithm's or the end-user's? We must think much harder and be much more critical about what *our* purposes are for Today's AI.

And alongside critique, surely we need purposeful action to get out of this mess. Cybernetics is concerned with purposefulness in both a practical sense — how does purpose operate in systems? — and a critical sense — what purposes *should* we pursue?

As a discipline focused on the functioning and purpose of complex adaptive systems, Cybernetics is uniquely suited to increase our understanding — and to help us change the course — of today's wicked challenges.

Yet it is critical to keep in mind that the wicked challenges of the world cannot be fully described or understood. Nor can they be "solved" — as if all we need to know is that a light bulb isn't working and we just have to find out why. If goals are agreed and causes are clear, we can act in concert and predict what our actions will bring. But in systems that are unpredictable and knowable, **we cannot wait to act until we can understand how to act — because that understanding is impossible. A core tenet of Cybernetics addresses that directly: we must act in order to learn, in order to know how to act.**

Building on the original Macy Meetings

"... What held the Macy attendees together, what gave them a sense of common purpose was an overarching conception of what the world is like, how we should understand it, and how we should act in it."
— Pickering 2015

There were many consequences to the insight that systems can be modeled in terms of their purpose. These consequences were explored in **a series of small conferences called the Macy Meetings**, named after the non-profit foundation that funded them in the 1940s and 1950s. **Participants came together from a wide swath of disciplines from both the hard sciences and the soft sciences.** Top experts in their individual fields focused together on the role of purpose in systems, striving to understand their behavior or designing them for better outcomes. They looked for unifying generalizations about purposive systems while exploring specific instances in their individual fields.

By that process they created a new language that bridged their disciplines, enabling conversations that were **trans-disciplinary**. The result was a new way of thinking and a new way of approaching how to act in a complex, unpredictable world. **They called this new field Cybernetics, from a Greek word meaning the art of steering — that is, staying on course — and in the case of systems where humans have impact, acting with intention.** (Sometimes situations become wicked because of human intention.) In complex systems that must adapt to their environment, purpose itself emerges and evolves through action.

These original Macy Meetings on Cybernetics had **significant impact that continues today** and they are known by name for that broad influence, 75 years later. Through the Macy Meetings conversations and their outcomes, the worlds of science, engineering, and

humanities were radically changed. With its models of feedback and purposive behavior, Cybernetics permeated fields ranging from neurophysiology and computer science to anthropology and psychotherapy.

But today we need more than a revolution *within* existing disciplines. Now, as at the inception of Cybernetics, we need conversations *across* disciplines — even embracing expertise from outside of academic conventions and institutions. Then we can better address the wicked challenges that are not contained by disciplinary conventions — challenges that may themselves be the consequences of silos that are created by those conventions. **In the face of today's global and wicked challenges, we need #NewMacyMeetings.**

Embracing the scale and subtlety of the challenge

The #NewMacy initiative is intended to trigger a resurgence of trans-disciplinary[7] conversations that were the origin of the field of Cybernetics in the 1940s and 1950s. From that era, **Cybernetics catalyzed a global increase in understanding of what are now generally called "complex adaptive systems"**[8] (Holland 1992). This phrase often refers to systems that are environmental and ecological, operating with unpredictable outcomes even before human action is involved. Since its origins, Cybernetics has offered the most widely-available quantifiable models of interaction in complex systems.

However, a further, less well-known insight also emerged at the origins of Cybernetics, one even more critical for approaching today's wicked challenges. Social and subjective aspects of complex adaptive systems emerge when human beings are part of the system.

Coexisting with the physical and conceptual aspects of complex adaptive systems are those aspects that are "soft".[9] The dynamic constituents of opinion and disagreement, conflicts of judgement and of power, and individual and societal values bring us to the fundamental issue**: What makes today's challenges "wicked" is the difficulty of agreeing on what the problem is, no less what to do about it** (RIttel & Webber 1973).   This is the fundamental blockage to coordinated action.

Self-awareness in the process of enquiry is a foundational contribution of Cybernetics. **Acknowledging the role of the observer in what we know and how we act has been part of Cybernetics from its earliest era** (Glanville 2003).

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[7] For expositions of trans-disciplinary conversations and actions, see Pickering 2010 on what he terms "antidisciplinarity."

[8] This phrase is offered here because of general acceptance. Stafford Beer preferred "exceedingly complex system" (Beer 1959) and emphasized the "unknowability" in his definition. We might say exceedingly complex systems are to cybernetics as complex adaptive systems are to complexity theory.

[9] "The hard sciences are successful because they deal with the soft problems; the soft sciences are struggling because they deal with the hard problems." Heinz von Foerster 1972.

Beginning through the American Society for Cybernetics

#NewMacy is a natural extension of the intentions of the American Society for Cybernetics. The ASC was founded in the 1960s with the participation of Margaret Mead, Warren McCulloch, Heinz von Foerster and other scientists prominent in their fields, in recognition of the need to help develop and disseminate the principles and practices of the field of Cybernetics.[10]

The initial #NewMacyMeetings will be hosted by the ASC, as we gather individuals and organizations into the initiative and mature the #NewMacy Network and its processes. Other organizations will be encouraged and in the long-term expected to take the lead in organizing topics of direct interest to their constituencies and intentions, consistent with the overall purpose of the #NewMacy initiative.

The ASC offers initial momentum for #NewMacy through the participation of individuals in the ASC's executive committee and members of the Society, as well as a range of outside colleagues, scholars, and advisors (further details below). As a means to generate interest and gather momentum, the ASC has initiated #NewMacy by:

- Framing the #NewMacy concept, including articulating goals that are contrasted with the original Macy Meetings from the 20th century (a more detailed document about this is being drafted)
- Proposing a format for the meetings themselves, based on a dialogical model that encourages effective exchange of ideas
- Holding experimental meetings, such as #NewMacyMeeting #1 in September 2020 and others to follow early in 2021
- Growing a network of individuals and organizations as participants as well as potential organizers of future meetings
- Disseminating outcomes from all #NewMacyMeetings, held by either the ASC or other organizations in the network, via a central web-based repository of materials (for example, lists of meetings with topics, descriptions, participants, media, and outcomes, with links to other sites and their online resources).

Context & Scope

*"Competence implies responsibilities. A doctor must act at the scene of the accident. We can no longer afford to be the knowing spectators at a global disaster. **We must share what competence we have through communication and cooperation in working together through the problems of our time.** This is the only way in which we can fulfill our social and individual responsibilities as cyberneticians who should practice what they preach." [emphasis added]*
– Heinz von Foerster 1970: "Responsibilities of Competence" [11]

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[10] The ASC's by-laws, history, and evolving activities can be found at the ASC website.

[11] #NewMacy draws seminal inspiration from a number of founders of the field of cybernetics including Heinz von Foerster, who alerted the scientific community to analogous concerns fifty years ago. He was an important contributor to the original Macy Meetings, an active force in the early decades of the

Adapting to our 21st-century context

We greatly value the original Macy Meetings and its participants for their contributions to the founding of Cybernetics and we acknowledge their role in the revolution that Cybernetics brought in subsequent decades.

Much has changed in the decades since the ASC was founded, and indeed since the original Macy Meetings in Cybernetics. While we respect the decisions of format, participants, and content made then (Pias 2016), we must honor what has changed since, even as we preserve a common goal of deep enquiry to bring about fundamental change in thinking and action in an ever more-demanding world. **The #NewMacyMeetings are an opportunity to critique and evolve the constituents, structure, and topics for a new era.**

While designed and executed as effective venues for interdisciplinary conversations, the **original Macy Meetings lacked a global, inclusive perspective**. Organized at the beginning of the Cold-War, they were **under the influence of the dominant geopolitical paradigm of the era regarding the opposition of the East and the West**. Also these **meetings were closed**, in that participation was limited and decided in advance by the organizers, making them exclusive to a group of already-acknowledged figures and limited to existing networks.[12]

We recognize this is a new era and to strictly reproduce the format and intentions of the original would be a disservice. Just as the original organizers and participants did in their time, **we must respond to changes in world conditions, to our new understandings, and to new urgencies**. We must **establish a unifying concept for #NewMacy that resonates with our current times and troubles — and to reach the people and places and problems that need attention and action.**

Spanning both physical and social systems

#NewMacyMeetings are a revival and revision of the original meetings for the challenges of the 21st-century.

#NewMacyMeetings are a revival in that we seek a rich diversity of theorists and practitioners to cross the boundaries of traditional disciplines. We seek general models for understanding and responding to the complex adaptive systems that are creating negative conditions for the intertwined system that comprises humanity and everything else on the planet itself. **At its origins in the 1940s, Cybernetics established the framing of circular causality** — A effects B effects C in turn effects A — **and placed the feedback loop at the center of systems modeling**.[13]

ASC, long-time contributor to the conceptual development of the field itself including Second-order Cybernetics, and a charismatic teacher.

[12] There are many dimensions for characterizing the original Macy Meetings as a means of contrasting them with today's conditions and conventions. A minimal number of comparisons are offered here to give the rationale for the approach taken for #NewMacy while a more detailed comparison under development may further influence the evolution of this effort.

[13] In the parlance of the field, this frame is focused on "observ**ed** systems" that are external to the observer, and is commonly called "First-Order Cybernetics."

#NewMacyMeetings are a revision in that we embrace the framing that social systems are inseparable from technical systems; that is, we will acknowledge that it is **we as human beings**, with our language, emotions, cultures, and biases, who **create the worlds we see and the worlds we live in.**[14] At the same time, humans are responsible for the ongoing destruction of the world that they live in with each other and with countless other species. While we have reached the moon, it has not yet been possible for society to even slow the effects of climate change or to begin to rebalance social and economic injustice — because these situations are deeply entangled with conflicting communal and individual biases.

Attempting to improve wicked situations by only attending to the technical components is naive and ineffective. Technical challenges in physical systems may become so complex as to defy clear understanding of what is going on. It's no longer a simple causal chain from broken light bulb to clear action. This creates uncertainty about what to do, and raises the level of stress. Disagreement and argument arises, and inevitably so does subjectivity, prejudice, and preference. **The social component impinges on the rational. Here we encounter another seminal contribution of Cybernetics**, and another benefit to bringing cybernetics to wicked challenges: the reason for, and nature of, our responsibility.

Being responsible

When asked to observe a scene or an interaction, we likely describe things we see and relationships among them. Why do we choose some things and some relationships and not others? If we are honest, we must admit that **we have made choices in what we describe and what we do not. As a result, we learn that we are responsible for our looking.**

From this moment on — once we look at our own looking — we cannot *not* see that we are responsible ([von Foerster 1991b](#)). There is no way back.

Reflecting further, we can realize that **what we see and say comes from our point-of-view and language, biases and preferences, rationality and emotions.** This simply reinforces that once we look at our own looking, **we are forever responsible for what we say and what we do**.[15]

This is Cybernetics — observing something outside ourselves in terms of **its** purpose — as well as *observing ourselves observing* in terms of **our** purpose. Wicked challenges can neither be seen nor mitigated without this awareness and humility.

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[14] In the parlance of the field, this frame is focused on "observ**ing** systems", that is, the recognition that we as observers cannot separate ourselves from the systems we purport to explain as if they exist objectively or independently of the world. This is commonly called "Second-Order Cybernetics." While this frame existed from the inception of the field, the concept was not yet named or explicit in the conversations of the original Macy Meetings. Including the observer (ourselves) in the observer's own domain of observations will introduce desire, intention, self-consciousness, and values into the tangible topics to explore. This represents a different take on Cybernetics as steering; it is one where growth and change can become desires, and desires themselves can change.

[15] Here we have stated the full import of "Second-order Cybernetics", which is far more than simply including the observer in the systems we describe.

Variety in Participation

"... fields ranging from robotics and complexity theory to architecture and design, psychiatry and the arts… have lost touch with one another and it is important to ask why."
— Pickering 2015

Engaging variety in a cadence of conversations

Pandemics and wicked challenges involve "systems of systems" such that no individual nor handful of individuals nor single organization has sufficient scope to comprehend conditions and devise actions toward a preferred future. Sufficient variety to achieve our evolving purposes and intended outcomes must come from the organizations and individuals we gather in conversation.[16]

We must design for rich and necessary variety[17] **in #NewMacy conversations**.

Sufficient variety can not be guaranteed in any given conversation but can be achieved across a cadence of conversations so long as variety is given attention between each conversation and participants are thoughtfully chosen for the next (Pangaro 2007).

In short, **the requisite variety in #NewMacy conversations — the inclusion of specific participants and processes and knowledge — must emerge "in the doing."**

Encompassing the trans-disciplinary, trans-global, and trans-generational

There are specific essential dimensions for describing the variety required for #NewMacy to achieve its purpose.

In synchrony with the history of Cybernetics and the original Macy Meetings, #NewMacyMeetings must be **trans-disciplinary to** achieve their necessary breadth. It is easier than ever to engage individuals from specific fields to come together; "interdisciplinary" is table-stakes for academic scholarship and conferences. Similarly, the importance of generalists and today's "systems" thinkers is commonly held. But there are new requirements for the 21st century.

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[16] This has been the process to-date that brings the intentions of #NewMacy and this document to where it is today.

[17] Variety here is used in a cybernetically-specific but broadly-significant sense, meaning the capabilities and capacities of a system such that it may act to achieve its intentions. Similarly, increasing "diversity" — in common parlance referring to the inclusion of a range of different social and racial and ethnic backgrounds, cultures, genders, sexual orientations, age, etc. — greatly expands possibilities for a system to respond to a wider range of situations, to achieve its intentions (Ashby 1956).

To bring forth agreement on effective action in the 21st century our #NewMacy conversations must be **trans-inclusionary and trans-global**.[18] This means embracing diversity, participation, and scope of interests across boundaries of geography, continents, and nations. Conversations must cross all the artificial boundaries we humans tend to create, often out of fear of others and fear from the illusion of a zero-sum game.

Perhaps most crucially of all, these conversations must be **trans-generational**. They must include every age cohort from student to retiree. Today's world soon becomes the world of the young. #NewMacyMeetings must encompass (and where necessary, even bring about) **shared understanding of worldviews across the generations about the world(s) we see**. Explicitly wishing to bridge differences while not erasing them, #NewMacy functions to bring about sufficient agreement on the world we want, so that we may act in accord. We need to achieve a rich dialectic across the worldviews of many age cohorts. In the same way we do not want old ideas arbitrarily dominating new ones, we do not want those who are "older" imposing what they know on the "younger."

In sum, all #NewMacy meetings must be structured as **trans-disciplinary, trans-global, and trans-generational** if they are to be true to our times and true to our challenges.

Moving toward action at the local level

#NewMacyMeetings must **move toward action by carrying its conversations into social, academic, governmental, non-profit, and commercial communities to catalyze new thinking and new action toward a world we want**, better than the one we have. We want individuals in those organizations to participate in and benefit from the outcomes of #NewMacy and bring those outcomes into their daily work. Without this connection to individuals and organizations operating at the local level, #NewMacy remains in the domain of aspirational dialog. To be effective locally, #NewMacyMeetings must reach agreement on goals and the means for achieving them. This calls for specific intentions for the #NewMacy Network.

Spanning organizations

As noted, wicked challenges call for a depth and breadth of resources that no single organization would likely be able to bring about significant change. To have an effect — achieving agreement and actions to effect change — #NewMacy must be a network of organizations and individuals, across dimensions of roles. The #NewMacy Network will comprise organizations that share similar goals and values in order to have the longest-lasting effect.

Immediate candidates are other systems societies and Cybernetics-related publications, but this is obvious and easy, as these organizations will immediately grasp the premise as well as see the synergy with their own purposes. The challenge will be to communicate to and attract

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[18] The possibilities of inclusive, globe-spanning conversations is woefully unexplored, and not only in Cybernetics or Systems or the Sciences. What can and ought Western science, culture, humanities — the basis for the original Macy Meetings — learn from non-Western traditions? What is required to unlearn the assumptions and facets of Western disciplines?

a diverse range of participants into the network. Identifying and pulling in the needed range of organizations is itself a significant task of the entire initiative.

Weaving a mesh of networks

Overall, the intention is not to create a centralized or controlled process but **to create a mesh of interactions across new networks**. Individuals and organizations are **invited to gather a #NewMacyMeeting around a specific topic** with the understanding that they **share our intentions to address wicked problems through trans-disciplinary conversations**, in the spirit of the original Macy Meetings. We would also **emphasize the importance of trans-global and trans-generational variety**.

Thus, just as the ASC will begin generating #NewMacyMeetings from the perspective of "Today's AI", and evolve topics and scope from there, other organizations will be encouraged to produce their own gatherings and evolve as appropriate to their interests and context.

Each organization in the #NewMacy Network may activate its own network of contacts across domains (design, systems, academia, commerce, governance, technology and infrastructure…) and generations (from colleagues, current and former students, alumni/alumnae...) to garner interest and expand the network itself in an outward spiral.

It will remain the responsibility of the ASC to **pool results to document the trajectory of all those in the network**, share what has been learned, and to improve the larger experiment of #NewMacyMeetings.

Gathering to collaborate

The organizations and individual participants that have been and will continue to be gathered cut across geography, expertise, domains, and ages. Current categories are:

1. **ASC #NewMacy Committee**: ASC members who choose to be involved in #NewMacy — already active, with wider participation to be invited
2. **#NewMacy Network**: Organizations who choose to affiliate with #NewMacy, whether to organize meetings or whose individual members choose to participate — a growing list is being identified
3. **#NewMacy Advisors**: Individuals who will offer close-in and on-going advice in one-on-one or small-group consultation for specific topics — already active, to be grown
4. **#NewMacy Council**: Scholars, practitioners, and interested individuals willing to lend their periodic advice on content, processes and fund-raising — some already agreed, more to be included.

Structuring the whole

The intention of #NewMacy is to **evolve a pattern for organizing and holding a series of conversations**.

Critical to the success of #NewMacyMeetings will be:
- Inclusiveness of participation across all boundaries and therefore potential barriers
- Format for interaction that encourages openness and achieves a rich, dialectical exploration of issues and potential actions
- Consideration of multiple formats and languages for the meetings while preserving the identity of #NewMacy — likely smaller, pre-selected, diverse and inclusive groups to drill into narrow topics as well as larger, open-ended forums for broader explorations
- A series of modest initial experiments to test assumptions and refine before reaching to broader communities and larger meetings (see #NewMacyMeeting #1, September 2020, the first experiment)
- Establishing a cadence from early meetings such that momentum and scale increases
- Capture and dissemination of outcomes.

In the mid-term we need to hold conversations virtually. Even after the COVID-19 pandemic is sufficiently resolved for unambiguously safe in-person meetings (which is likely to take a year or more from this writing in early 2021), the ability to hold effective conversations across geographies will be indispensable. Video conferencing systems are the baseline need, though richer features to collaborate across time and place (for example, qiqochat) will be valuable to establish and foster.

Next Steps

"... my money is on restarting the conversation around ***a vision of the world built out of... systems that we can never hope to understand fully, not least because they are always evolving and becoming something new****. The guiding theme would be a vision of the world as unknowable in just this sense,* ***integrally coupled with a concern for practical ways of continually exploring the unknown and adapting to it.****" [emphasis added]*
— Pickering 2010a

Focusing first on "Today's AI"

Given that the field of artificial intelligence arose from Cybernetics, it fits that today's cyberneticians initiate #NewMacyMeetings with the topic of "Rethinking Today's AI".
Conversations would include those who influence the creation of AI systems in the past, present, or future, such as researchers, educators, designers, programmers, ethicists, and students. Activities could be:
- Questioning today's assumptions about the contribution and values of today's AI systems (and where they came from)
- Creating value by synthesizing new viewpoints, design processes, and implementation directions for AI systems
- Attracting participation from individuals across the spectrum of roles and responsibilities working in the field today
- Exploring the democratizing of AI and technology more broadly

- Fostering new models of interaction with the internet, beyond access of content and enabling contributions by and conversations across boundaries and with all people.

Since this conception of #NewMacy in March of 2020, the recognition of the global situation and the concomitance of pandemics / wicked situations of all stripes has spread widely. Many initiatives, including those in communities of Cybernetics and Systems, among individuals and societies, have also spread. We embrace our colleagues across these organizations and will work toward synergies of effort, whether inside the #NewMacy Network or otherwise.

Building the #NewMacy Network

The forcefulness and variety available to a network of interactions around #NewMacy brings many benefits to participants:
- Sharing connections to global Systems/Cybernetics societies and academic communities, and their members and activities, to garner awareness and participation of other research networks, academic research positions and internships, skill-building workshops, and publications
- Collaborating on the creation of open-source kits and pattern libraries for designers working the technology for inclusivity, trans-cultural learning, and new, revolutionary perspectives on the nature of communities joined through technology
- Researching the emergence of new forms of governance of social spaces in physical, virtual, and hybrid modalities
- Growing online resources of knowledge and its application.

Secondary outcomes from #NewMacy may include:
- Energizing new networks of cooperation across disciplines and organizations, age cohorts and geographies, communities and cultures
- Spreading transdisciplinary practice as a means of addressing complex intersections of technology, purpose, and values within social and ecological systems.
- Building evidence for the invaluable contribution of trans-geographical, trans-inclusive, and trans-generational collaboration
- Reflecting on what Western science and its outcomes — AI, Big Data, the global internet, etc. — can learn from a diversity of cultures and values
- Forefronting and passing on the insights and responsibility that derives from including the observer in the observation
- Spreading the use of Cybernetics as a powerful means for approaching wicked situations and for reducing their negative influence in our 21st century world.

Moving ahead

As an initial experiment, [#NewMacyMeeting #1](), "Why Can't Cybernetics Tame Pandemics?" was held in September 2020 as part of the [ASC 2020 Global Conversation conference]().

We plan to continue with a few small-scale #NewMacy experiments early in 2021, as we evaluate our progress in building alliances for the #NewMacy Network. We hope to hold our first comprehensive meeting in 2021.

With comments or interest in participating in any capacity, please write to Paul Pangaro at paul.pangaro@asc-cybernetics.org.

Epilogue

What do we want to change?

As we decide what we want to change and how, I believe that we must come to **agree on the values that we do not want to change**. Who are we as human beings and social creatures, and therefore, what do we wish to conserve? What are our values?

Once agreed, these values become one safeguard against the wrong kind of change. At the same time, **we open a space of possibilities to explore the change we might want** (Maturana & Dávila 2013).

Through conversations, toward action.

Acknowledgement

This initiative recognizes and is grateful to Andy Pickering's writing on "Next Macy Meetings" (Pickering 2015), which helps answer, Why do we need this? After giving background on the original Macy Meetings in Cybernetics — where in the 1940s and 50s a transdisciplinary group came together to discuss the universals of governing complex systems — Pickering argues that (also quoted in the main text above):

> "... fields ranging from robotics and complexity theory to architecture and design, psychiatry and the arts… have lost touch with one another and it is important to ask why. What held the Macy attendees together, what gave them a sense of common purpose was an overarching conception of what the world is like, how we should understand it, and how we should act in it."

Historically Cybernetics meets the criteria of a transdisciplinary model in that it develops its own language, embraces a variety of disciplines with no one discipline above or dominant over the others, and explores a wide range of ideas, interests and applications (Müller 2010).

We have lost the ability to operate in the world we have created. Science, governance, society, technology have failed to protect the human race and the planet itself. What should we do?

Pickering continues (also quoted in the main text above):

> "... my money is on restarting the conversation around a vision of the world built out of... systems that we can never hope to understand fully, not least because they are always evolving and becoming something new. The guiding theme would be a vision of the world as unknowable in just this

> sense, integrally coupled with a concern for practical ways of continually exploring the unknown and adapting to it."

We must embrace uncertainty and design accordingly—in conversation, each with others not like one's self (Dubberly & Pangaro 2019).

Scope of global wicked challenges

In early conversations the scope of #NewMacy considered global wicked challenges, as a deeply emotional response to current events: COVID-19, then Black Lives Matter, followed by the grossly inadequate responses to those, which came with ricochets of the history of injustice and inequality around the world.

That initial reckoning was audaciously and deliberately ambitious:

- Today's AI platforms and algorithms that control more and more of our world
- Racism / Social Justice / Policing / Intersectionality & Inclusion
- Sexism, Violence Against Women, Sex Slaves, Child Rape Tourism
- Habitat Loss, Fisheries Collapse, Endangered Species, Wildlife Trade, Pesticides, Pollution
- War, Weapons Trade, Chemical Weapons, Lethal Autonomous Weapon Systems/Killer Robots
- Urban Planning and Racial Inequity
- Economic Inequality
- Climate
- Health / Healthcare systems / Patient Privacy Rights
- Food and Water Safety, Food Scarcity,
- Art and Design / Decolonizing Design

As stated above, no single organization or even broad initiative can hope to span the expertise required to address multiple topics, even without the entanglements of wicked situations. During conversations that have formulated the approach described in this document, we decided to focus first on "Today's AI" and its deep adoption by the large internet platform companies, given the justifications rendered above. Thereafter we can shift into adjacent areas that are appropriate successors. For example, Today's AI magnifies racial inequities through algorithmic bias in a justice system that already oppresses minorities. This suggests it would be an appropriate follow-on topic. We can also support other organizations in the #NewMacy Network to take on topics in their domain.

References

N.B. References are being reviewed and revised toward redressing the extreme gender imbalance.

1. Ashby, W. Ross 1956: *Introduction to Cybernetics*, University Paperbacks.

2. Bateson, Mary Catherine: *Our Own Metaphor: A Personal Account of a Conference on the Effects of Conscious Purpose on Human Adaptation*, Hampton Press.

3. Beer, A. Stafford 1959: *Cybernetics and Management*, London: English Universities Press.

4. Dubberly, Hugh, & Pangaro, Paul 2019: "Cybernetics and Design: Conversations for Action", chapter in *DESIGN CYBERNETICS*, Fischer & Herr (eds.), Springer Design Research Foundation Series.

5. Glanville, Ranulph 2003: "SECOND ORDER CYBERNETICS", in *Systems Science and Cybernetics*, [Ed. Francisco Parra-Luna], in Encyclopedia of Life Support Systems (EOLSS), Developed under the Auspices of the UNESCO, Eolss Publishers, Oxford ,UK, [http://www.eolss.net].

6. Glanville, Ranulph 2004: "The purpose of second-order cybernetics", *Kybernetes, Vol 33 No 9/10,* pp 1379-1386.

7. Holland, John H. 1992: "Complex Adaptive Systems", *Daedalus*, Vol. 121, No. 1, A New Era in Computation (Winter, 1992), pp. 17-30

8. Maturana, Humberto & Dávila, Ximena 2013: "Systemic and meta-systemic laws", #8.

9. Mead, Margaret: "Cybernetics of Cybernetics" — to be added

10. Mead, Margaret: Proceedings of Macy — to be added

11. Müller, Albert 2010: "What does it mean to be a inter/meta/transdisciplinary subject?", presentation at the American Society for Cybernetics Conference, video by Jude Lombardi.

12. Pangaro, Paul 2007: "Modeling Engagement: Designing Conversations and Managing Complexity".

13. Pask, Gordon 1969: "The meaning of cybernetics in the behavioural sciences (The cybernetics of behaviour and cognition; extending the meaning of 'goal')", *Progress of Cybernetics*, J.Rose (ed), Proceedings of the First International Congress of Cybernetics, 1969.

14. Pias, Claus 2016: Cybernetics. The Macy Conferences 1946-1953. The Complete Transactions, (ed.), Chicago: Chicago.

15. Pickering, Andrew 2010a: *The Cybernetic Brain: Sketches of Another Future*, University of Chicago Press.

16. Pickering, Andrew 2010b: "Ontology and Antidisciplinarity", in Barry and Born (eds), *Interdisciplinarity: Reconfigurations of the Social and Natural Sciences*, Routledge 2013.

17. Pickering, Andrew 2015: "The Next Macy Conference: A New Interdisciplinary Synthesis", IEEE Technology and Society Magazine, September 2015.

18. Richards, Lawrence 2020: "Why Can't Cybernetics Tame Pandemics?", #NewMacyMeeting #1, September

19. Rittel, Horst and Webber, Melvin 1973: "Dilemmas in a general theory of planning", Policy Sci 4, 155–169 (1973). https://doi.org/10.1007/BF01405730

20. Sweeting, Ben 2017: Plenary presentation "Cybernetics, virtue ethics and design", Relating Systems Thinking and Design (RSD6) 2017 Symposium, Oslo,

21. Von Foerster, Heinz 1971: "Perception of the Future and the Future of Perception", reprinted in von Foerster (2003), Understanding Understanding, New York: Springer, p 209.

22. Von Foerster, Heinz 1972: "Responsibilities of Competence", Journal of Cybernetics. Vol. 2, No 2, 1972. Reprinted in von Foerster (2003), Understanding Understanding, New York: Springer, pp 191–197.
23. Von Foerster, Heinz 1991a: Interview with Yveline Rey, published after "Ethics and Second-Order Cybernetics, in von Foerster (2003), Understanding Understanding, New York: Springer, p 298.
24. Von Foerster, Heinz 1991b: "Ethics and Second-Order Cybernetics, in von Foerster (2003), Understanding Understanding, New York: Springer, pp 287-297.
25. Zuboff, Shoshana 2019: *The Age of Surveillance Capitalism: The Fight for a Human Future at the New Frontier of Power*, PublicAffairs.

Many of these documents and others related to #NewMacy are available here.

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