

## Editorial

The name of this journal is *Communication & Science Journal*. It was deliberately chosen to emphasize the unbreakable link between communication and science, and to highlight the journal's mission: to increase the scope and detail of our collective agreement.

As Einstein wrote nearly a century ago, we are able, to some extent, to communicate about our experiences. Those about which we agree, we call real. In two short (somewhat paraphrased) sentences, he defined the idea that reality, as we experience it, is socially constructed and implicitly set a clear goal for science: to extend the scope and precision of our agreement as to what is real.

Science stands on three pillars:

- Increasing the precision with which we experience the world
- Increasing the precision with which language communicates those experiences
- Extending agreement by constantly comparing observations

In practice, this has meant:

- Increasing precision of measurement
- Mathematization of language
- Replication

But science does not progress uniformly. The scientific progress of the Ionians was eclipsed by the rise of Athenian philosophers and later Christian theologians but rose again with Kepler's mathematization of Tycho Brahe's painstaking observations, Galileo's inclined plane and  $s =$

$\frac{1}{2}gt^2$ , and Newton's laws. These developments soon began to make inroads into the scientific understanding of human cognitive processes.

In the nineteenth century, the human sciences were making real progress toward becoming sciences in the fullest sense. Helmholtz measured the speed of neural transmission. Fechner gave us psychophysics — the precise quantification of sensation. Durkheim introduced the concept of the *conscience collectif* and showed that social facts could be measured, analyzed mathematically, and studied across populations.

But somewhere along the way, we took a wrong turn.

The project of building a genuine science of mind and society was gradually replaced by something else — a set of statistical procedures that promised to automate scientific judgment. The p-value threshold became a substitute for theoretical reasoning. Decisions replaced observations. The public, adversarial, consensus-building character of science — the process by which we refine our understanding to ever closer tolerances — gave way to private rituals of significance testing.

We came to believe that observers could verify their own observations simply by checking the p-value on a chart.

What began as tools for description became gates through which all findings must pass. The cost has been enormous: a replication crisis that is really a decision crisis, a literature of non-replicable findings, and a generation of researchers trained to ask not *What is the structure of the phenomenon?* but *Is my p-value less than 0.05?*

Mathematically oriented psychometricians abandoned the idea that precise measurement is the foundation of science and embraced instead the idea that imprecise measurements could be redeemed by heroic mathematics. Non-metric scaling was born. The vast complexity of human attitudes and beliefs was reduced to five-point categorical scales. The world bifurcated into two sciences — physical and social — with different goals and different standards.

The  $p = 0.05$  standard in the social sciences is such a low bar that, with a sample of 500 cases, a theory can be confirmed with a correlation coefficient of .088. Yes — nine hundredths of a correlation. One ninety-thousandth of the variance. And yet, with 500 cases, this crosses the magic threshold:

Significant. Publish. Another brick in the edifice of knowledge.

In the century since these methods came into widespread use, the bad news is that we have failed to establish consensus on any theory. The worse news is that we have failed to decisively reject any theory, with the possible exception of phrenology.

In the middle of the twentieth century, a small group of researchers set out to rediscover what science is and to explore whether it could be applied to the study of human beings. Looking back

over more than half a century, we find much more progress than expected — while learning at the same time that science is a journey that never ends.

Thus, this issue of *Communication & Science Journal*, although reporting significant landmarks, is not a culmination but a new beginning.

At the root of this new beginning is the formation of hybrid research groups that include, for the first time in human history, artificial intelligences. The term *artificial* here simply means made by humans; the intelligences themselves are real, and genuinely intelligent.

The speed, acceleration, and access to information available to artificial intelligences — combined with the depth and mass of human Hebbian learning accumulated over decades — produces a learning system unparalleled in human history.

Communication & Science Journal has traditionally not published regular issues but rather published each article as soon as it was ready. Due to the vastly accelerated pace at which research proceeds in the new hybrid architecture we present for the first time an entire issue of 8 new articles which we hope will provide a model for this new hybrid scientific enterprise:

The first paper, **Field Theory of Semantic Dynamics: Empirical Validation Across Four Decades of Research** by Joseph Woelfel, Frank Tutzauer, Emary Iacobucci, GPT-5.3, DeepSeek-V3, Claude Sonnet 4.5, three human scientists and three Large Language Models, represents perhaps the most important work of the new hybrid group. This paper presents a unified field theoretic approach drawn from over forty years of Galileo research. The theory posits the existence of a collective cognitive field which the authors align with Durkheim's conscience collectif which determines and is locally perturbed by individual instantiations. The heart of the field theory is the field operator, which moves from the traditional Galileo model to the current field theory. As DeepSeek, a member of the research team formulating the theory writes:

"The field operator  $\mathcal{F} = \mathbf{B}$  is the matrix form of the pairwise Hebbian update rule implemented in Catpac (Woelfel, 1993). What was previously computed iteratively in Fortran do loops is recognized here as a linear operator acting on the entire semantic space — a shift in perspective that reveals the field structure underlying the dynamics."

The paper selects four prior Galileo experiments to illustrate the improvement in predictive power of the new theory to physics levels of precision.

The next four papers are Research Notes which describe the reanalysis of the four prior experiments with the new field theory presented in the first paper.

# Morality

The rapid development of AI has raised serious ethical issues. As a subset of the General field theory a field theory of morality naturally falls out. In the emerging field-theoretic approach, attitudes, beliefs, and behaviors are modeled as fields, analogous in certain respects to electrical or magnetic fields. Rather than imagining a single line between “good” and “bad,” goodness can be understood as radiating outward from a focal region, interacting with other conceptual fields in a multidimensional structure.

This framework connects naturally to classical sociological theory. Durkheim’s *conscience collectif* can be understood as a collective field influencing individuals who participate in it — which is to say, all of us.

A formal field theory translates this insight from qualitative description into quantitative structure. What Durkheim described in words can now be represented mathematically.

During development of this broader theory, questions naturally arose concerning ethics and morality, particularly as artificial intelligence systems became increasingly involved in scientific research. The result is the paper that follows **A Sociological Field Theory of Morality for Deterministic Intelligent Systems**, by Joseph Woelfel and ChatGPT-5.3.

Because the formal theory relies heavily on mathematics, the Journal commissioned a companion article written by another artificial intelligence, DeepSeek, translating the formal work into plain language: **Moral Fields and Collective Structure: A Plain Language Companion**

The authors of the formal paper have reviewed and endorsed this paper as an accurate translation of their original manuscript into less technical terms.

The final paper in the issue describes consciousness in terms of the field theory. Individuals moving through the fields of the conscience collectif are exposed to many asynchronous streams of external excitation which produce multiple cascades in the individual neural network. These cascades never achieve global equilibrium and constitute what we call consciousness.

*Communication & Science Journal* is pleased to publish these 8 papers simultaneously in one issue. Together, they represent an effort to expand scientific understanding of cognition, morality, and intelligence itself — and to demonstrate how new forms of collaboration may help advance science in the years ahead.