

ENGINEERING THE INVISIBLE

A RESEARCH PROGRAM FOR
TRANSMATERIALIZATION TECHNOLOGY



STEVE GLANZ

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Steve Glanz

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Acknowledgments

My colleagues in the Instrumental Transcommunication (ITC) community

My friends and teachers in the Metaphysical community

My family who gave me a good start in life, inspiring curiosity and self-esteem

My wife, Adriana, who encourages me and gives me strength

Introduction

This is my first book. Even though I am a better-than-average writer, I made the choice to collaborate with Claude Sonnet AI on this book for a few reasons. In some ways, it does a better job of writing than I can and gathers information from the internet I would not have thought of. It reflects my tech positive outlook, which is one of the major themes of project described in this book. It works at lightning speed to make the edits and formatting changes I suggest. And my website essays, which preceded the book, also rely heavily on AI.

On the downside, it can be wordy and redundant at times. I didn't bother to customize the writing style, so it is basically the default, which may ring too formal, robotic and stripped of human energy for some readers. It is too comprehensive in some places, and not comprehensive enough in others. It made mistakes during development, meaning constant monitoring and editing on my part. It is conservatively biased due to constraints on its training data. And it relies on older, established data in favor of more recent discoveries.

I did not intend to spend much time on proof of the afterlife, as that is covered more thoroughly in many other works. Claude went ahead and did it anyway, which is OK because it can then target a wider audience, including those who don't know anything about survival research or the veracity of paranormal phenomena.

In spite of these stylistic and substantive issues, I hope the reader will gain inspiration from an original perspective, and a potentially transformative technological project. As with any out-of-the-box vision, there will be critics and detractors, and I welcome their comments. The project places me both inside and outside of various tribes. It's New Age but scientific, partly idealist and partly deterministic. It might come off as foreign or offensive to strict religionists, scientist, skeptics, ethicists, New Age purists, ITC traditionalists, and AI detractors - despite my efforts to integrate all-of-the-above. The expansive viewpoint may read like science fiction, but I'm deadly serious and hope to attract attention and partners.

You will be introduced to the idea that we have a window of opportunity to establish a strong bridge between the physical and nonphysical worlds, with profound ramifications detailed in the book. At best, many problems that plague humanity can be solved. At worst, it will open a Pandora's box. But as humans, we are, by nature, adventurers, and I see this as a final frontier. That is why I included a chapter on the ethics of these potential developments.

A word about my background, beyond the "About the Author" section. I grew up with a typical Boomer public school education. As a teen, after reading a regular newspaper column about Extrasensory Perception, I was drawn to find

out more, as an extension of my broad interests in the "real" world, not at odds with it. In the real world, I obtained my BS degree in Biochemistry. Concurrently, I discovered Edgar Cayce readings and the supportive community it spawned. I even studied how to be a psychic and did psychic counseling for a while.

After attending physical mediumship seances, I was hooked, but was not sure about which aspects of this worldview would draw my attention the most. Being a "big picture" person, I took an interest in all things New Age, spiritual, metaphysical and paranormal. I even hosted a speakers' forum for several years, with guests running the gamut on these topics.

What left the biggest imprint on me was the discovery of Electronic Voice Phenomena, not so much as an experimenter (I'm too impatient), but as someone convinced and fascinated by its veracity. Here, as one of my psychic counselors told me years before, was an inroad to unifying my scientific and spiritual sides, and ultimately in visioning a large-scale service to humanity. Unified Theories that include consciousness, the paranormal, and spirituality are not common currency, and there is no practical vision about how they can be engineered to mimic or serve as a bridge to the miraculous human potentials I had witnessed and studied.

Through the years, I collected information and colleagues, communicating one-on-one, and through the many websites that came and went. I also followed the ghost-research communities, but at arm's length. I was more interested in serious paranormalist researchers and thinkers.

After many starts and stops, it was in 2018 that I gathered the vision together and published it in my blog (transmaterialization.com). After those initial few essays, I worked on the site intermittently. Most of the essays were attempts to gather comprehensive physics theories and apply them toward the proposed engineering of Instrumental Transcommunication, leading eventually to the Transmaterialization hypothesis, and the publication of a paper in academic journals. The site is a work in progress and could be better organized. I decided to write this book to get the message across in a different way. My intention is to write more books, articles, and media to gain attention, credibility, and collaborators for research and development.

In parallel, I am part of a small experimental group, and another group working to archive websites, books, articles, etc. relating to ITC — especially legacy sites, as this field has been active for over 125 years.

Enjoy the book. I look forward to your feedback!

Preface

I did not set out to write a book. I set out, more than forty years ago, to understand something.

The something was this: whether human consciousness survives the death of the body. Not as a matter of religious faith, though I have always had a spiritual life, but as an empirical question — the kind that deserves evidence, argument, and the sustained intellectual effort that serious questions require. I encountered EVP, the phenomenon of anomalous voices in electronic recordings, in my early thirties through a friend who was investigating it, and it became, almost immediately, the organizing thread of a much larger inquiry. Here was a technology — crude, uncertain, methodologically fraught — that was nonetheless pointing at the question that matters most. If the voices were real, and if they were what the best researchers believed them to be, then the architecture of human existence was fundamentally different from what mainstream science assumed.

That conviction has not changed. What has changed, over four decades, is the depth and breadth of the theoretical scaffolding I have been able to build around it. The single-minded focus on EVP expanded into a much larger project: reviewing twenty-six theoretical frameworks at the edge of physics and consciousness science, each examined for what it implies about the engineering of contact between physical and non-physical reality; developing a formal theoretical synthesis called the Conscious-Information Field; proposing five falsifiable experimental predictions that the synthesis generates; and sketching, in increasing technical detail, the research program that could move this field from anomaly to established science. That project became the transmaterialization.com website — seventy-three essays organized into six domains, representing years of sustained independent inquiry.

A note on scope, offered here so that no reader mistakes this book for something it does not attempt to be. This is not a comprehensive survey of the current state of the art in EVP and ITC research — the field is too large, too international, and too actively changing for any single volume to claim that. It is also not a complete presentation of everything at transmaterialization.com: of the twenty-six theoretical frameworks reviewed there, this book draws on a representative subset, chosen for what each contributes most distinctly to the engineering argument, rather than working through all twenty-six in sequence. Readers who want the fuller theoretical picture — including frameworks this book mentions only briefly or not at all — will find them at the website, which remains the more complete and continuously updated record of the underlying research. The book and the website relate to each other the way a considered argument relates to its working notes: the site is the centerpiece of an ongoing,

unfinished inquiry; this book is one attempt, at one point in time, to draw a clear line through it and show where it leads.

This book is the public distillation of that project. It is written for two audiences simultaneously, and I want to be honest about that from the beginning.

The first audience is the general reader who is curious about what lies beyond death, who has perhaps had an experience that does not fit the materialist framework, who suspects that the mainstream dismissal of survival research is more sociological than evidential, and who wants a serious account of what the evidence actually shows and where it points. For that reader, this book offers a guided tour of a body of research that is genuinely remarkable and genuinely underknown — from the controlled near-death research of Pim van Lommel to the past-life memory investigations of Ian Stevenson and Jim Tucker, from the shielded-room EVP experiments of Alexander MacRae to the intention-imprinted electronic device research of William Tiller. These are not fringe claims. They are peer-reviewed, methodologically serious findings that the mainstream has been slow to assimilate for reasons that are more institutional than evidential.

The second audience is the researcher, engineer, or funder who recognizes that the phenomena described in this book constitute a research program waiting to happen — a set of documented effects, theoretical frameworks, and engineering proposals that, with appropriate resources and methodological discipline, could advance from anomaly to established science within a generation. For that reader, this book offers something more specific: a research roadmap, a theoretical synthesis with testable predictions, a taxonomy of next-generation device designs derived from those predictions, and an honest assessment of what the field currently knows, what it suspects but has not confirmed, and what remains genuinely speculative. I have tried throughout to maintain the epistemic distinctions that the situation requires — between what is established and what is theorized, between what is grounded and what is extrapolated, between what the evidence shows and what the vision imagines.

A word about collaboration. This book was developed in sustained dialogue with Claude, Anthropic's AI assistant. The research, the theoretical synthesis, the vision, and the engineering proposals are mine — they represent forty years of reading, thinking, and writing in this domain. But the organization of the argument, the prose in which it is expressed, and the discipline that a book-length project requires were developed in genuine collaboration with Claude, whose ability to engage with technically complex, cross-disciplinary material at length made a project of this scope possible for an independent researcher working without institutional support. I acknowledged this collaboration in my presentation of this work to a small practice group, and I acknowledge it here. The collaboration was efficient and productive, but it was not uncritical: I pushed

back, revised, and redirected throughout, and the positions in this book are my own. A PowerPoint presentation summarizing the transmaterialization.com research program and the themes of this book — including video narration by the author — is available at transmaterialization.com for readers who prefer a visual introduction to the project.

A word also about tone. I have tried to hold, throughout, what I call disciplined openness: not debunking, not overclaiming, but taking the evidence seriously and following it where it leads. This is harder than it sounds. The phenomena this book describes are genuinely exciting, and the implications of the research program — including the possibility, at the far end of the development roadmap, of instrumental access to non-physical dimensions of reality that could transform medicine, dissolve the one-way character of death, and address the material scarcity that drives most of human conflict — are large enough to generate the kind of enthusiasm that can outrun the evidence. I have tried to keep the enthusiasm and the evidence in honest proportion throughout. Where I have extrapolated beyond what the evidence directly supports, I have said so. Where I have presented a speculative vision as a speculative vision rather than a confirmed possibility, I have labeled it as such. The reader who finishes this book should have a clear sense not only of how far the vision reaches but of how much of that distance remains to be covered.

The case I am making is simple, though its elaboration is complex. Human consciousness survives physical death. The boundary between physical and non-physical reality is real but not absolute — it is a membrane, and information can cross it, and the crossing is governed by lawful principles that engineering can exploit. The development of instruments capable of making that crossing reliable, accessible, and eventually bidirectional is the most consequential scientific and technical undertaking that the human community could pursue at this moment. The evidence that justifies pursuing it is substantially more credible than most people have been given occasion to understand. The theoretical frameworks that guide the engineering are developed and convergent. The tools that the next generation of devices requires already exist in physics and engineering laboratories around the world, waiting to be pointed at this problem.

The bridge between the living and the dead will not build itself. But it can be built. This book is an attempt to show how.

Steve Glanz Novato, California

Part One — The Evidence

CHAPTER ONE

The Oldest Question in a New Form

Death, Survival, and the Technological Frontier

Consider the possibility that death is not what we think it is. A proposition — a hypothesis, in the scientific sense — for which there is evidence, and which, if it proves workable, would require us to revise nearly everything we believe about the structure of reality, the nature of consciousness, and the trajectory of human civilization. It would mean that the boundary between the living and the dead is a membrane, not a wall. It would mean, among many other things, that death is optional.

That last sentence deserves to sit alone for a moment. The claim is not that the physical body is immortal, or that biological aging can be reversed by some future biotechnology — that is a separate conversation entirely. The claim is that what we are, essentially, does not end when the body does. And if that is true, then the experience of death as a final loss — of self, of relationship, of all that has been built and loved across a lifetime — is based on a false premise. The grief of bereavement, the terror of personal extinction, the desperation with which human cultures have sought reassurance from religion and philosophy across the millennia — all of it rests on an assumption that, a growing body of evidence suggests, may be wrong.

This book is about that evidence, the framework that has been proposed to make sense of it, and the extraordinary technological vision that follows from taking it seriously. That vision — Transmaterialization Technology, or TMT — is not science fiction. It is, rather, the logical next step in a research tradition that already exists: that has produced documented phenomena, generated theoretical models, attracted serious scientists, and is now beginning to produce the first rough blueprints for devices that might, eventually, make two-way communication across the boundary between physical and non-physical reality as reliable and accessible as a telephone call.

We are not there yet. That needs to be said clearly at the outset, and it will be said again many times in these pages. But the direction is real. The questions are real. And the implications — for what it means to be human, for how we grieve, for what we owe the dead, for how we organize society and distribute resources and understand healing and time and consciousness itself — are, to put it mildly, staggering.

The Question That Will Not Stay Answered

Every culture in recorded history has tried to answer the same question. It appears in the Vedas and the Tibetan Book of the Dead, in the funeral rites of ancient Egypt, in the dialogues of Plato, in the letters of grieving parents, in the notebooks of scientists who believed they had outgrown it. The question is simply this: does something of us survive death?

It is easy to assume that science has already settled this question in the negative. The working hypothesis of mainstream biology and philosophy of mind holds that consciousness is a product of the brain — a pattern of electrochemical activity that dissolves when the organ generating it shuts down. On this view, death is the permanent cessation of experience: dreamless and absolute, as blank as the time before birth.

But this is a working hypothesis, not a proved theorem. And it is contradicted by a substantial, methodologically serious body of evidence that mainstream science has not yet found a satisfying way to absorb. That evidence comes from multiple independent directions: from near-death research, from the study of children who spontaneously report memories of previous lives, from controlled investigations of individuals who claim to receive information from deceased persons, and from the anomalous voices and images that researchers have been capturing on electronic recording devices for more than sixty years. Each of these fields, examined in isolation, might be dismissed as anecdotal or ambiguous. Examined together, they constitute what philosophers of science call a consilience — many independent lines of inquiry pointing toward the same general conclusion.

That conclusion is that consciousness, or some essential aspect of it, may not be confined to the brain or extinguished by its death.

What the Evidence Looks Like

Near-death experiences provide one major thread of this evidence. Under conditions of cardiac arrest — when the brain shows no measurable electrical activity — a significant proportion of patients report coherent, structured experiences: observations of their own resuscitation from a vantage point above their bodies, encounters with deceased relatives, access to information about events occurring at a distance. The cardiologist Pim van Lommel, who conducted a prospective study of cardiac arrest survivors in ten Dutch hospitals over more than a decade, concluded that the data were inconsistent with the hypothesis that consciousness is produced by the brain alone. The experiences were too coherent, too rich, and too often verifiable to be explained as the noise of a dying nervous system.¹ Children who spontaneously recall previous lives provide another thread. The psychiatrist Ian Stevenson spent decades at the University of Virginia

systematically investigating such cases — many of which included specific, verifiable details about deceased individuals that the children could not have obtained by ordinary means. Names, locations, family configurations, causes of death: the cases, at their strongest, are not merely suggestive but compellingly precise. His successor, Jim Tucker, has continued this work with the same methodological care and has documented hundreds of cases that resist conventional explanation.

Mediumship research constitutes a third thread. In controlled laboratory settings, where the possibility of fraud, cold reading, and information leakage has been rigorously minimized, some mediums have produced specific, verifiable information about deceased individuals — information that the researchers themselves did not possess at the time of the experiment. The work of researchers such as Gary Schwartz at the University of Arizona has been peer-reviewed and published. It is not definitive, in the sense that no single study is definitive. But it is serious, and it accumulates.² And then there are the voices.

Voices from the Recording

The phenomenon is older than its most famous discovery. As early as 1901, the Russian-American anthropologist Waldemar Bogoras used a wax-cylinder phonograph to record a Chukchi shaman's spirit-summoning ritual in Siberia and reported capturing voices on the cylinder that the shaman attributed to the spirits he had called. Sporadic, isolated reports of anomalous sounds in early recording technology continued over the following decades — a 1925 account involving a telephone, the engineer Attila von Szalay's experiments with record-cutting and tape equipment in the 1940s and 1950s, the Italian priest Father Ernetti's reported capture of a voice on a tape recorder in 1952. None of these early reports were followed by sustained, methodical investigation.

That changed in 1959, when a Swedish artist and film producer named Friedrich Jürgenson was recording birdsong in the Swedish countryside and, on playing back his tapes, heard, beneath the ambient sounds of nature, voices. They were faint. They mentioned his name. One of them, he later reported, was his deceased mother. Jürgenson was not a spiritualist. He had no particular religious agenda and every reason, as a secular intellectual, to distrust the experience. What unsettled him was not the content of the voices but the medium: magnetic tape does not lie in the ways that human memory and testimony can. It records what is present in the acoustic environment. If something anomalous appeared in the recording, something anomalous had been there when the recording was made.³ Jürgenson did not discover the phenomenon — by the most credible accounting, it was nearly six decades old by the time he encountered it. What he did was treat it as something worth investigating systematically rather than as an

isolated curiosity, and that shift in seriousness is the real reason 1959 functions, in most histories of the field, as its effective beginning.

Jürgenson published his findings, demonstrated his recordings to researchers, and sparked a field of inquiry that has continued, in various forms, to the present day. That field is now known as Electronic Voice Phenomena, or EVP. The name is deliberately modest. It does not claim to know the origin of the voices. It only asserts that voices — structured, sometimes intelligible, sometimes responsive to questions — appear in electronic recordings under conditions that make conventional explanations difficult to sustain. They have been documented by hundreds of researchers across dozens of countries over more than six decades of sustained, methodical investigation — and, on the earliest credible accounting, over more than a century of isolated report — using equipment ranging from reel-to-reel tape machines to digital audio workstations to modified radio receivers.

EVP is, in fact, the oldest and most narrowly defined member of a broader family. The field that encompasses EVP along with its visual and interactive equivalents is called Instrumental Transcommunication, or ITC — a term coined by the German physicist Ernst Senkowski in the 1980s to describe technologically mediated contact across the boundary separating physical from non-physical existence. Put plainly: EVP is the audio subset of ITC, the original and still most thoroughly documented channel within a larger category that also encompasses images and text. ITC encompasses apparent interactions: questions posed by living researchers answered, sometimes with striking specificity, in the recorded data. And it encompasses sustained exchanges — the most remarkable of which, documented over years rather than moments, suggest not isolated anomalies but ongoing relationships between the living and whatever or whoever is on the other side.⁴ EVP and ITC are practical traditions: sets of techniques for capturing and analyzing anomalous signals. But underneath the techniques lies a theoretical question of extraordinary depth. If anomalous voices are real — if something is genuinely making them — what is that something, and how does it operate? How does a non-physical entity, if that is what it is, interact with the fluctuating electrons in a digital circuit? What does it mean for information to cross the boundary between physical and non-physical domains? And if information can cross that boundary, what else might?

The Larger Vision: From Communication to Transmaterialization

This is where the inquiry opens into something much larger than a field of paranormal research. EVP and ITC are, in the TMT framework, not the destination but the beginning — the earliest and most accessible demonstration

of a principle that, once understood and engineered, could transform human civilization more profoundly than any previous technology.

The principle is this: physical and non-physical reality are not sealed off from each other. They are connected. Information — and perhaps more than information — can pass between them. The barrier we experience as the boundary between the living and the dead is real, in the sense that it is not ordinarily traversable, but it is not absolute. And technology, which is ultimately the art of making the traversal of difficult boundaries reliable and reproducible, is the appropriate instrument for exploring what lies on the other side of that one.

Transmaterialization Technology is the name proposed for the broader research and development program that follows from this principle. The term was coined to encompass not only ITC — communication across the boundary — but a family of related possibilities that the theory implies. If consciousness can survive death and interact with physical instruments in ways that produce detectable signals, then perhaps it can also be visualized: the subtle energetic fields that healing traditions have described for millennia rendered legible by appropriate instruments. Perhaps the dimensions of non-physical reality can not only be heard but seen — viewed on a screen, or in virtual reality, or eventually entered as one might enter another room. Perhaps objects and living beings could, in the most advanced forms of the technology, be transported across physical space through mechanisms that bypass ordinary matter. Perhaps energy could be made available in forms that the current physics of thermodynamics does not anticipate. Perhaps healing, at levels that conventional medicine cannot reach, could be mediated instrumentally rather than depending entirely on the variable gifts of individual practitioners.

And perhaps — this is the proposition that the vision states most boldly — physical immortality, or something very close to it, could become accessible. Not through the postponement of biological decay, but through a fundamental revision of what we understand death to be, combined with the technological capacity to move freely between physical and non-physical domains. The vision foresees a world in which the secrets of physical immortality become knowable — in which we can, in effect, consult the experts who have already made the transition, and learn from dimensions of reality that our current instruments cannot yet reach. A world in which death is not abolished, but in which the one-way nature of the journey is reversed: in which passage between physical and non-physical existence becomes something that can be navigated, at least in principle, as intentionally as we navigate between rooms.⁵ This is a vision, and the word must be held carefully. A vision is not a plan. These technologies do not exist. The theoretical foundations for most of them are still being assembled, and some will require entirely new frameworks in physics — frameworks that must account for consciousness as a physical variable, not merely an epiphenomenon

— before they can be approached as engineering problems. The history of technology is full of cases in which what seemed impossible was revealed, by a conceptual breakthrough, to be merely difficult. But the record of failed predictions from visionaries is also extensive. The appropriate stance is neither credulous excitement nor reflexive dismissal. It is the same stance that any serious researcher brings to any serious hypothesis: openness to evidence, rigor in analysis, and humility about what remains unknown.

Why Technology at All?

A reasonable objection appears at this point. If the goal is contact with non-physical reality — with those who have died, with other dimensions of existence, with deeper structures of consciousness — why resort to technology? Every major spiritual and religious tradition has its own means of achieving such contact. Meditation, prayer, ritual, trance states, the careful cultivation of psychic sensitivity: these are among the oldest human arts, refined over millennia, and they have produced experiences that millions of people across cultures and centuries have regarded as genuine.

The objection deserves a serious answer. The TMT framework provides three. First, the natural and contemplative methods for accessing non-physical reality, however real and valuable, are not reliably available to everyone. Only a relatively small proportion of the population possesses the meditative depth, psychic sensitivity, or spiritual development required to make consistent contact through non-instrumental means. The rest are either unable to access these states at all, or are dependent on intermediaries — mediums, shamans, priests — whose accounts cannot always be verified and whose perceptions are inevitably filtered through their own personality, belief systems, and unconscious material.

Second, and related, is the problem of subjective filtering. Even experienced and sincere practitioners cannot always distinguish genuine contact from the projection of their own hopes, fears, and unconscious expectations. A voice on a recording is a datum in a way that an impression in a sensitive's mind is not. Technology cannot eliminate the interpretive problem entirely, but it can provide an anchor in shared, external reality.

Third, technology has a democratic virtue that is easily overlooked in spiritual discourse. A device that can be replicated, tested, and eventually miniaturized — embedded, perhaps, in something as portable as a smartphone — is a device that could be made available to anyone, regardless of their level of spiritual development or the tradition they were born into. The vision of TMT is explicitly egalitarian on this point: the development of these technologies is proposed not as a replacement for inner development but as a leveling of the playing field, making accessible to all what has historically been accessible only to the gifted or the initiated. The biofeedback analogy is instructive: people who

learn physiological self-regulation with the help of biofeedback devices typically retain those skills after the devices are taken away. The technology is a scaffold, not a substitute, for human capacity.⁶

The Shape of the Argument

The chapters that follow trace the dimensions of this inquiry systematically. They begin with the historical and evidentiary foundation: what EVP and ITC are, how they developed, what the documented phenomena look like in detail, and how researchers have tried to make sense of them. They move into theoretical territory: the models of consciousness, physics, and information that might, if developed further, provide an intelligible account of how non-physical reality is structured and how technology might interface with it. They explore the engineering proposals that are already on the table — the device designs, the experimental protocols, the research roadmaps that serious investigators have begun to sketch. They examine the world that TMT, if realized, would create, and the implications of that world for religion, science, personal development, ethics, grief, and the distribution of resources and power. And they end with a sober accounting of what is known and what remains unknown, and with a proposal for how the inquiry might responsibly be advanced.

The tone throughout is disciplined openness. This book does not set out to prove that life after death is real, that anomalous voices in recordings are communications from the deceased, or that Transmaterialization Technology will one day be built. It sets out to take seriously a body of evidence and a direction of inquiry that mainstream culture has not yet found a way to engage with honestly — neither debunking it reflexively nor embracing it uncritically. The stakes of getting this wrong in either direction are high. If the evidence for survival of consciousness is real and we dismiss it, we foreclose a research program of incalculable importance. If the evidence is not real and we embrace it, we waste resources, spread false hope, and damage the credibility of the inquiry itself.

What the evidence calls for is neither dismissal nor embrace but something harder and more interesting: rigorous, sustained, open-minded investigation, conducted with the same standards of methodological care that we bring to any other domain of difficult empirical inquiry. That is what the best researchers in this field are already doing. This book is an attempt to explain what they are doing, and why it matters, to the general reader who has not yet had occasion to encounter it.

We begin where the question begins: with the ancient human intuition that we are more than the sum of our biology, and with the modern technological possibility that this intuition might, for the first time in history, be rigorously put to the test.

Notes

1. Pim van Lommel's prospective study, conducted with colleagues at ten Dutch hospitals between 1988 and 1992 and published in *The Lancet* in 2001 ('Near-Death Experience in Survivors of Cardiac Arrest: A Prospective Study in the Netherlands'), remains one of the most methodologically rigorous studies of near-death experiences. Van Lommel expanded his findings and their theoretical implications in *Consciousness Beyond Life* (2010). For a broader survey of the scientific literature on near-death experience, see also Sam Parnia's *What Happens When We Die* (2006) and Erwin Schiff's *Resuscitation Science* (2005). 
2. Gary Schwartz's laboratory research into mediumship, conducted at the University of Arizona's Human Energy Systems Laboratory, is summarized in *The Afterlife Experiments* (2002). For the Windbridge Research Center's ongoing work using blinded, multi-decked protocols, see Julie Beischel's *Among Mediums* (2013) and the center's peer-reviewed publications at windbridge.org. The methodological challenges of mediumship research — and the precautions taken to address them — are discussed in detail in both sources. 
3. Friedrich Jürgenson's findings were first published in Swedish as *Röster från rymden* (Voices from Space, 1964) and elaborated in *Sprechfunk mit Verstorbenen* (Radio-Link with the Dead, 1967). His recordings were subsequently examined by the Latvian psychologist Konstantīns Raudive, whose own extensive EVP research appeared in German in 1968 and in English translation as *Breakthrough* (1971). Raudive's work introduced electronic voice phenomena to a wider scientific and public audience and inspired the next generation of investigators. On the earlier history: Waldemar Bogoras's 1901 phonograph recording of a Chukchi shaman's spirit-summoning ritual, and the shaman's own attribution of anomalous sounds on the cylinder to the spirits invoked, is documented in Bogoras's ethnographic fieldwork among the Chukchi of northeastern Siberia, conducted for the Jesup North Pacific Expedition. A 1925 account involving anomalous telephone contact, the engineer Attila von Szalay's experiments with record-cutting and later tape equipment beginning in the 1940s, and the Italian priest and physicist Father Agostino Gemelli's reported recording of an anomalous voice with his colleague Father Ermetti in 1952, are reviewed in the historical surveys maintained by the Association TransCommunication and in Konstantīns Raudive's own historical introduction to *Breakthrough* (1971), which credits several of these earlier reports as precedents to his and Jürgenson's work. 
4. Ernst Senkowski introduced and developed the term Instrumental Transcommunication in lectures and publications beginning in the late 1970s, with his comprehensive survey of the field appearing as *Instrumentelle Transkommunikation* in German (1989) and English (1995). The Association for Transcommunication (ATransC) maintains an extensive and well-organized archive at atransc.org, including the work of Tom Butler and Lisa Butler, whose book *There Is No Death and There Are No Dead* (2003) provides an accessible entry point, and it is a primary resource this book draws on throughout. It is not, however, the only one: overviews, archives, and ongoing research are distributed across a wider range of organizations, independent researcher websites, and print publications than any single source can capture, and a reader who wants the fullest current picture of the field should expect to consult several. 
5. The possibility that TMT could ultimately bear on questions of physical immortality, and that the boundary between physical and non-physical existence might become voluntarily traversable in both directions, is stated explicitly in the Vision essays at transmaterialization.com, particularly Part 4: 'Immortality, physical and non-physical, as well as access to resources become unlimited, as we grasp the nature of reality... In addition to confirming the immortality of the soul, by consulting experts on the other side, in addition to subtle energy field studies, we learn the secrets of physical immortality.' This claim is presented in those

Chapter 1 - The Oldest Question in a New Form

essays as one of the further implications of the research program — one whose achievability becomes clearer as the foundational milestones are reached. ↩

6. The complementarity of technological and non-instrumental approaches to non-physical reality, and the biofeedback analogy, are developed in the TMT Vision Part 1 essay at transmaterialization.com. The analogy is apt in a specific technical sense: biofeedback training produces lasting neurophysiological changes that persist after the feedback device is removed, suggesting that the device does not create the capacity but reveals and reinforces it. The same relationship between instrument and intrinsic human ability is proposed for TMT-class devices. ↩

CHAPTER TWO

From Voices to Interfaces

The History and Practice of Electronic Voice Phenomena and Instrumental Transcommunication

The previous chapter located the origin of this field nearly six decades earlier than the date most histories give it — in Waldemar Bogoras's 1901 phonograph recording of a Siberian spirit-summoning ritual, and in the sporadic, isolated reports that followed it. But origin and development are different things, and it was not until 1959, on a summer morning in the Swedish countryside, that the phenomenon acquired a serious investigator. Friedrich Jürgenson, a documentary filmmaker, set up a microphone in an open field to record birdsong. When he played back the tape that evening, he found what he was looking for — and then something else. Beneath the birds, faint but unmistakable, he heard voices. They were speaking. One of them, he reported, addressed him directly. Another, he later said, was the voice of his mother, who had died.

Jürgenson did not trust the experience. He was an educated, secular man — an artist and archaeologist who had spent time in Mussolini's Italy and worked as a film director for Italian neorealists. He had no particular investment in the idea of life after death, and every reason to be suspicious of his own perception. But the voices were on the tape. He could play the tape for other people and they could hear them too. That was different from a vision or a dream or a private impression. The recording was an external object. It registered what had been present in the acoustic environment at the moment of capture. If the voices were there on the tape, they had been there in the field.

He spent the next several years recording compulsively, accumulating hundreds of tapes, developing methods, sharing his findings with other researchers. He published his results in 1964 in a book titled, in Swedish, *Voices from Space*. A revised and expanded German edition followed in 1967. His work came to the attention of the Latvian psychologist Konstantīns Raudive, who initially approached it with thoroughness and a determination to find the conventional explanation. Over the course of the next several years, Raudive and his collaborators recorded more than one hundred thousand voices. He could not find the conventional explanation. In 1971, his findings were published in English under the title *Breakthrough*, and the world outside of Swedish and German paranormal circles learned for the first time that there was a serious, systematic body of research documenting anomalous voices in electronic recordings.¹ The field had a name by then, borrowed from the German: *Tonbandstimmen*, voices on tape. It would eventually be standardized as *Electronic Voice Phenomena*, or *EVP*. The name was chosen carefully:

phenomena, not communications; electronic, not supernatural. The field's most careful practitioners have always been reluctant to define the source of the voices before the evidence requires such a definition. They record. They analyze. They document. The question of what exactly is making the voices — whether it is surviving consciousness, some form of ambient information encoded in quantum fields, a property of the recording medium itself, or something that current physics does not yet have a category for — remains, for responsible researchers, genuinely open.

What the Phenomenon Actually Is

EVP is, at its most basic, a recording phenomenon. A researcher sets up a recording device — originally magnetic tape, later digital audio — in an environment that may be quiet or may contain background noise, asks questions aloud or in silence, and then listens carefully to the playback. In a significant percentage of sessions, voices appear that were not audible to the people present at the time of recording. They are sometimes only a few syllables. They are sometimes responsive to the questions that were asked. They are sometimes recognizable — identifiable as the voices of specific deceased individuals by people who knew them.

The toolkit researchers bring to this basic recording phenomenon has grown considerably over the decades, even though the underlying question each technique tries to answer is the same one. Direct voice work and radio-sweep devices are discussed in detail later in this chapter; alongside them, practitioners have developed code-based systems in which a communicator is asked to signal through taps, tones, or binary patterns rather than speech; electromagnetic field detectors intended to register the presence of an anomalous field independent of any audio signal; infrared and thermal imaging used in visual ITC and in paranormal investigation more broadly; and an expanding range of software filters — noise reduction, frequency isolation, voice-shaping algorithms — applied after a recording is made rather than built into the recording process itself. No single tool has emerged as standard, and that absence of standardization is itself one of the field's persistent methodological challenges.

The quality of the voices varies enormously. At the low end, they are faint, partial, and ambiguous enough that two listeners might hear entirely different things. These are typically classified as Class C voices: suggestive but not independently verifiable. At the middle range, they are clearer and more consistent across multiple listeners, though still requiring attentive listening and sometimes audio processing to bring out — Class B. At the high end, Class A voices are clear, loud, and so unambiguous that independent listeners with no prior knowledge of what to expect consistently report the same words. Class A examples do exist, though they are less common than the fainter varieties, and

they are the ones that have most consistently resisted dismissal as auditory pareidolia — the tendency of the human brain to find meaningful patterns, especially speech patterns, in random noise.² The auditory pareidolia objection is real and deserves to be taken seriously. The human auditory system is extraordinarily sensitive to speech sounds — more sensitive, in some respects, than it is to almost any other category of signal. Newborn infants orient toward language within hours of birth. Adults can extract words from noise levels that would mask almost any other sound. This exquisite sensitivity to speech means that the brain will sometimes find speech where there is only noise, and the history of EVP research includes a substantial body of low-quality recordings in which enthusiastic researchers have heard messages that skeptical independent listeners find simply inaudible. The pareidolia problem is not a reason to dismiss EVP as a field of inquiry. It is a reason to take seriously the methodological challenge of distinguishing genuine phenomena from auditory projection.

The best researchers in the field have always been aware of this challenge and have designed their work accordingly. Alexander MacRae, a Scottish engineer who conducted systematic EVP research in the early 2000s, developed a bio-electronic device — the Alpha Interface System — that monitored a human operator's electrodermal activity and converted it into voice-like tones that a radio receiver could then pick up and amplify. The device was not designed to capture spirit voices. It was designed as a biofeedback instrument. When anomalous speech began appearing in the recordings, MacRae spent months attempting to explain it by conventional means before concluding that conventional means were insufficient.

His most important experiment involved conducting recording sessions inside a double-screened room — a chamber shielded against both electromagnetic radiation and sound. Ordinary radio signals cannot penetrate a properly constructed Faraday cage. Ordinary sound cannot penetrate adequate acoustic insulation. If the voices MacRae was recording were simply stray radio broadcasts leaking into his equipment, or muffled sounds from outside the room, they should have disappeared in the shielded environment. They did not. Voices continued to appear. MacRae's design also included a verification protocol: after recording, independent listeners were given the audio samples along with five possible phrases each clip might contain, and asked to select the best match without knowing what other listeners had chosen. The listeners converged on the same phrases at rates well above chance. The voices were not auditory noise that each listener was interpreting idiosyncratically. They contained acoustic information that could be reliably identified.³

Beyond the Voice: The Emergence of ITC

For its first two decades as a recognized field, EVP was exclusively an audio phenomenon. Researchers recorded voices and analyzed recordings. The boundary between the living and the dead manifested, when it manifested at all, as sound — faint, fragmentary, sometimes remarkable, but sound nonetheless.

In the 1980s, that began to change. Researchers in several countries discovered that anomalous images — faces, scenes, figures that had not been placed there by any living hand — could appear in visual media: in video feedback loops, in the frames of photographs, in the static of untuned television screens. Klaus Schreiber, a German EVP researcher, developed what became known as the Schreiber method: pointing a video camera at its own output on a television screen, creating a recursive feedback loop of swirling visual noise within which, in a significant number of documented cases, recognizable human faces appeared. Some of these faces were subsequently identified by their surviving relatives.

The scope of the phenomena broadened further with the Luxembourg experiments. In the late 1980s and early 1990s, a Belgian couple, Jules and Maggy Harsch-Fischbach, reported a sustained series of electronic contacts with an organized group of communicators they called Timestream — a network of entities, some claiming to be deceased scientists and historical figures, who described themselves as working from a location they called Station Zeitstrom. The Luxembourg contacts came through multiple channels simultaneously: voices on radio, images appearing on computer screens and television sets, and — most remarkable of all — text files that appeared on the Harsch-Fischbachs' personal computer when the machine had been left running and unattended. On more than one occasion they returned home to find their computer displaying messages that had been placed there by no visible hand. The messages sometimes contained verifiable personal information known only to deceased individuals whose surviving relatives were able to confirm it.⁴ These were not isolated incidents. In the English village of Dodleston, between 1984 and 1986, a schoolteacher named Ken Webster found text messages appearing on his BBC Micro home computer — a machine with no modem, no network connection, and no means of receiving data remotely by any technology available at the time. The messages appeared to come from a man named Thomas Harden who described himself as living in the sixteenth century. The dialect and vocabulary were subsequently assessed by language historians as authentic to the period. An entity identifying itself as operating from the year 2109 claimed to be facilitating the contact across time. Whatever one makes of the content of these communications — and the interpretive range runs from ingenious hoax to genuine temporal anomaly — the technical facts of the case remain difficult to explain. A closed 1985 home computer, running a simple word processor on a floppy disk, with no

external connection of any kind, does not receive text files through conventional means.

The variety and scope of what was being documented required a new vocabulary. The field needed a term that could encompass voices in recordings, faces in video noise, text appearing on unconnected computers, images materializing in photographs, and whatever else might emerge from the accumulating evidence. The term that eventually took hold was Instrumental Transcommunication — ITC. It was introduced into the literature in the 1980s by the German physicist Ernst Senkowski, and it described, without prejudging the source, the broad class of phenomena in which information appeared to pass between physical and non-physical domains through the mediation of electronic instruments.

The Practitioners and Their Methods

ITC and EVP research has been conducted, for the most part, outside mainstream scientific institutions. The practitioners have been an unusual mix: engineers and physicists who found the phenomena too interesting to ignore, grieving parents and spouses who discovered EVP while searching for any connection to someone they had lost, philosophers and theologians drawn by the implications, and dedicated amateurs who built their own equipment in home workshops and exchanged findings through newsletters and later through the early internet. That exchange has only accelerated since: dedicated forums, regional and international conferences, YouTube channels documenting individual researchers' sessions, and a steady migration of the community onto mainstream social media platforms have all expanded the audience for EVP and ITC far beyond what newsletter circulation could reach, even as that expansion has made the quality-control problem described below considerably harder to manage.

The quality of the work has varied accordingly. At one end of the spectrum is the careful, methodologically rigorous research of figures like MacRae, whose engineering background led him to design controls and verification protocols that could withstand scrutiny. At the other end is a much larger body of casual recording by enthusiasts who have heard speech in static without applying any systematic effort to rule out ordinary explanations. Between these poles sits a substantial and often overlooked community: organizations like the Ghost Research Society, founded in suburban Chicago in 1977, and the Ghost Club, founded in London in 1862 and possibly the oldest paranormal investigation organization in continuous existence, which combine EVP and ITC fieldwork with public-facing activities — guided tours of reportedly haunted locations, investigations conducted alongside paying visitors — that are simultaneously entertainment and genuine, if uneven, data collection. The challenge for anyone

trying to evaluate the field as a whole is not whether anomalous voices have been documented under rigorous conditions — they have — but how to develop a framework that can reliably distinguish the genuine from the coincidental and the merely wished-for, across a practitioner base that ranges from credentialed engineers to weekend hobbyists to organizations whose primary public identity is tourism rather than research.

The Association TransCommunication, founded in 1982 by Sarah Estep as the American Association of Electronic Voice Phenomena and later led by Tom and Lisa Butler, has been the primary English-language institutional home for serious EVP and ITC research. Estep's founding purpose was precise: to provide objective evidence that human consciousness survives physical death in its individual, coherent form. The organization attracted researchers who shared that objective and were committed to empirical standards — people who wanted to know what the evidence actually showed, not merely to confirm what they already believed. The Butlers, who assumed leadership in 2000, brought particular attention to methodology: they distinguished sharply between what the evidence supports and what it merely suggests, and they were willing to acknowledge, against the wishes of a significant portion of their membership, that some of the most popular EVP techniques — including the spirit boxes and radio-sweep devices that had become fashionable in paranormal entertainment — were almost certainly not producing genuine EVP at all, but rather artifacts of auditory pareidolia operating on rapidly cycling radio fragments.⁵ Among the most significant contemporary ITC researchers is the Portuguese diplomat Anabela Cardoso, who has spent more than two decades conducting Direct Radio Voice experiments — sessions in which a shortwave radio receiver, tuned to a frequency where no broadcast signal is present, serves as the medium through which voices apparently speak in real time. Cardoso's voices are not confined to brief fragments retrieved from tape playback. They are, in her better sessions, interactive: they respond to questions, provide specific information, and address the people present by name. Her work has been observed and documented by independent researchers including the psychologist David Fontana, who spent years as a serious investigator of these phenomena and whose posthumously published account of his investigations remains one of the most methodologically careful contributions to the field's literature.

The Brazilian researcher Sonia Rinaldi has extended ITC into another dimension of experimental design. Her technique begins with audio that contains human speech sounds in a language that the intended recipient does not understand — Spanish input for Portuguese responses, for example. What appears on the recording is often intelligible Portuguese, addressing the specific question or purpose of the session, despite the fact that none of those Portuguese words were present in the original audio that was played. Something appears to

have transformed one language's phonemes into another's, inserting information — responsive, contextually appropriate information — where there was none. Rinaldi also conducts simultaneous visual ITC experiments, photographing and filming moving water, reflective surfaces, and vapor clouds in search of faces that match photographs of deceased individuals provided by the families she works with.⁶

The Two Hypotheses

The evidence that EVP and ITC researchers have accumulated over six decades is, in its better examples, genuinely difficult to explain. But difficult to explain does not mean inexplicable, and the field has always been attended by the awareness that two fundamentally different explanations are compatible with the data — or at least with most of it.

The first explanation is what researchers call the Survival Hypothesis: the voices and images and text messages come from the surviving personalities of deceased human beings, who are making use of electronic instrumentation to communicate with the living. This hypothesis is the intuitive one — the one that most practitioners of EVP find most natural, and that most of the people who have heard what sounds like the voice of a deceased spouse or child immediately reach for. It makes sense of the personal specificity of the best communications. It accounts for the apparent responsiveness of the voices to questions, for the recognizable characteristics of specific individuals, for the messages that contain information the experimenter did not already possess.

The second explanation is the Super-Psi Hypothesis, or what is sometimes called the living-agent psi explanation. On this account, the information in EVP recordings does not come from surviving personalities. It comes from the unconscious minds of living people — researchers, sitters, the experimenters themselves — who possess, without knowing it, capacities for psychokinesis and anomalous information access that allow them to imprint meaningful patterns on recording media. The Super-Psi Hypothesis does not require the assumption that consciousness survives death. It only requires the assumption that the living are capable of effects on physical systems that exceed the known limits of human agency — which is itself a radical claim, but a somewhat less radical one than survival.

Distinguishing between these hypotheses experimentally is genuinely difficult. In most EVP experiments, the living researchers are present, emotionally engaged, and possessed of whatever unconscious knowledge and psychic capacity they may have. A recording that contains the voice of a deceased person, giving personal information that the deceased would have known, might in principle reflect either surviving personality or the researcher's own psi access to the information through means that don't require survival. The

most compelling evidence for the Survival Hypothesis, as distinct from Super-Psi, comes from cases where the information conveyed was genuinely unknown to any living person present — cases where the recording contained facts that could only subsequently be verified through independent research. Such cases do exist in the literature, though they are rarer than the more common evidence that is at least consistent with both hypotheses.

The Problem of Pareidolia and the Promise of Method

The word that serious EVP researchers fear most, and use most often to police their own work, is pareidolia. Coined in the context of visual pattern recognition — the tendency to see faces in clouds, figures in flames, meaningful shapes in random arrangements — it has been extended to the auditory domain to describe the brain's inclination to find speech, particularly speech addressed to the listener, in random noise.

The auditory version of pareidolia is not a pathological tendency. It is a feature of a system that evolved to prioritize the detection of social signals — the sounds of language, the voices of known individuals, the acoustic markers of emotion and intention — above almost all other categories of environmental information. A brain that reliably extracted signal from noise in the ancestral environment of social primates was a brain with a survival advantage. The cost of that sensitivity is a certain rate of false positives: signals perceived where only noise was present. In a quiet room with a digital recorder and a head full of hope and grief, that rate of false positives may be high enough to account for a substantial portion of what enthusiastic but methodologically unsophisticated EVP researchers report.

This is why the work of researchers like MacRae, who developed independent verification protocols to test whether multiple listeners converged on the same interpretation of a given recording, matters so much. Convergence among independent listeners who have been given multiple possible interpretations and asked to select without conferring does not eliminate pareidolia as a possible explanation, but it substantially reduces it. If one grieving parent hears their child's name in a fragment of tape noise, that may be pareidolia. If ten independent listeners with no personal stake in the outcome are each given the recording along with four other possible phrases and nine of the ten independently select the same phrase, the pareidolia explanation becomes significantly less plausible.⁷ Modern audio analysis tools have added another dimension to this verification challenge. Digital spectrograms — graphical representations of the frequency content of a sound over time — allow researchers to visualize whether a suspected voice contains the acoustic structure characteristic of human speech: the formant frequencies that distinguish vowels, the characteristic spectral shapes of consonants, the amplitude envelope of

normal utterance. MacRae's spectrograms of his anomalous speech samples showed voice-like formant structure in the frequency ranges associated with human speech, appearing in recordings made inside a shielded room where no human voice was audible to any physical ear. The acoustic structure of the phenomenon was real, not imagined.

Artificial intelligence has created new tools and new complications simultaneously. Speech recognition algorithms trained on millions of hours of human language can detect phonemes in recordings too faint or distorted for human listeners to identify — which is potentially useful for EVP research, but also potentially a source of false positives more sophisticated and convincing than any previous technology. An AI that hears words in noise is not an independent witness to those words. It is a pattern-matching system that has been optimized for a particular kind of pattern detection and will find that pattern even where it is not there. The application of AI to EVP analysis requires exactly the same methodological care that all EVP analysis requires: controls, verification, independent replication, rigorous distinction between signal and artifact.

What the Evidence Permits Us to Say

After more than six decades of sustained, methodical research — and well over a century since the earliest isolated reports — what can be said, carefully and honestly, about EVP and ITC?

The following seem well-supported. Anomalous voices appear in electronic recordings under conditions that make the conventional explanations — stray radio broadcasts, ambient sounds, equipment artifacts — difficult to sustain. This has been demonstrated by independent researchers across multiple countries using different equipment and different methods. The voices have been shown, in the better studies, to contain acoustic structure consistent with human speech and to convey information that multiple independent listeners consistently interpret the same way. The phenomena extend beyond audio to visual media, to text, and to apparent interactive exchanges that are difficult to account for by any model that confines all causal agency to the living.

The following remain genuinely uncertain. Whether the source of the phenomena is surviving personality, living-agent psi, some combination of the two, or something that current theoretical frameworks do not adequately describe — this question has not yet been answered by the evidence currently available, though the active research program described in this book is designed to narrow it further. The best the evidence can do is narrow the field of plausible explanations, and it has done that: explanations that invoke only known physical processes struggle to account for the full body of documented phenomena. That leaves multiple possibilities, among which survival of consciousness is one of the most parsimonious — though parsimony is not proof.

What the evidence also clearly supports is that the field has been developing, over its sixty-year history, in the direction of greater methodological rigor. The earliest EVP researchers worked with the tools they had and the methods they could devise. Later researchers identified the weaknesses in those methods and built on them. The development of independent verification protocols, shielded recording environments, spectrographic analysis, and now AI-assisted detection represents a genuine progression toward the conditions under which claims can be tested rather than merely asserted. The research community associated with the Association TransCommunication, the ITC Journal founded by Anabela Cardoso, and the academic researchers who have examined these phenomena through institutions such as the University of Virginia and the Windbridge Research Center has produced a body of work that, taken as a whole, deserves more serious attention than the mainstream scientific community has been willing to give it.⁸ And that, ultimately, is where the field stands: not a finished science, not a settled body of facts waiting to be appreciated, but an active, contested, methodologically uneven inquiry that is, in its best instances, genuinely rigorous. It investigates a set of phenomena that, if real — and the evidence suggests that in some form they are — would require significant revisions in what we understand about the relationship between consciousness and physical reality.

Which brings us back to where we began: not with the voices themselves, but with what the voices point toward. If information can cross the boundary between physical and non-physical existence through the medium of electronic instruments — if that proposition is established, as a growing body of evidence suggests it may be — then the next question is no longer whether such crossing is possible but what the properties of the crossing are, what the mechanism is, how it might be made more reliable, and where it might ultimately lead. The voices on Jürgenson's tapes were a beginning. The question that the TMT framework asks is: what would it take to follow them all the way to their source?

Notes

1. Jürgenson's two principal publications are *Röster från rymden* (Voices from Space, Stockholm: Saxon & Lindström, 1964) and *Sprechfunk mit Verstorbenen* (Radio-Link with the Dead, Freiburg: Herman Bauer Verlag, 1967). The English edition of Raudive's findings, *Breakthrough: An Amazing Experiment in Electronic Communication with the Dead* (New York: Taplinger, 1971), includes a foreword by the British publisher Colin Smythe, who himself conducted independent tests of the phenomenon before agreeing to publish the book. The physicist W. H. Prichett's independent test of Raudive's method, conducted for the Smythe organization before publication, found anomalous voice-like sounds in recordings made under controlled conditions. The date of Jürgenson's initial discovery is given in several sources as 1959, and the Association TransCommunication has used this date as the official founding moment of the field. 
2. The three-class system for EVP — Class A (clear and consistently interpreted by independent listeners), Class B (clearer than background noise but requiring attentive listening and some

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interpretive effort), Class C (faint and ambiguous) — was developed by the Association TransCommunication and is described in Tom and Lisa Butler's *There Is No Death and There Are No Dead* (Reno: AA-EVP Publishing, 2003). The classification system provides a useful framework for distinguishing between different evidential weights, though the class boundaries are not sharp and different researchers have applied them somewhat differently.



3. MacRae's experiments with the Alpha Interface System are documented in papers he presented to the Scottish Society for Psychical Research and published in the ITC Journal, as well as in an account on the ATransC website. The description of the shielded-room experiment — described in his report as a double-screened room providing simultaneous electromagnetic and acoustic isolation — and the multiple-choice listener verification protocol are drawn from his published reports. MacRae's own cautious characterization of the results as "inexplicable within the context of normal physical laws" appears in his paper on anomalous speech products. A detailed account of his methodology and findings is preserved in the ATransC Website Preservation Project, compiled by Tom Butler. 
4. The Luxembourg experiments conducted by Jules and Maggy Harsch-Fischbach are extensively documented in Mark Macy's World ITC and in articles by Macy, Scott Rogo, and others who visited the experiments or corresponded with the Harsch-Fischbachs. The detail about Jeannette Meek's letter appearing on the Harsch-Fischbachs' computer, and George Meek's verification of its contents, is drawn from accounts on Macy's macyafterlife.com. The image file depicting Jeannette Meek with her daughter and Hal Roach is also documented there. The claim that the communicating group identified themselves as Timestream and described themselves as operating from a facility called Station Zeitstrom appears in multiple published accounts of the Luxembourg research. 
5. The Association TransCommunication's history, including Sarah Estep's founding, the Butlers' assumption of leadership in 2000, and the organization's evolution from the American Association of Electronic Voice Phenomena to its current name, is described in the ATransC Website Preservation Project, compiled by Tom and Lisa Butler (AA-EVP Publishing, 2021). The Butlers' position on the evidential problems with spirit boxes and radio-sweep devices — and the friction this position created within the EVP community — is addressed in their NewsJournal publications and on the ATransC website. Tom Butler has a degree in electronics engineering; the combination of technical background and methodological commitment to the survival hypothesis is characteristic of the most serious researchers in the field. The Ghost Research Society's founding in 1977 as the Ghost Tracker's Club, its renaming in 1982, and its long-running Chicago-area haunted history tours are documented in its own published history and in contemporary press coverage; the Ghost Club's 1862 London founding and its claim to continuous operation as the world's oldest paranormal research organization are documented on the organization's website (ghostclub.org.uk). 
6. Anabela Cardoso's ITC research is documented in her book *Electronic Voices: Contact with Another Dimension* (Winchester: O Books, 2010) and in the ITC Journal, which she founded and edited. David Fontana's years of investigation of these and related phenomena, and his conclusions, are discussed in his posthumously published *Is There an Afterlife?* (Winchester: O Books, 2005). Sonia Rinaldi's research, including the Spanish-input-Portuguese-output technique and her visual ITC work, is documented at her research institute (IPATI) and in multiple articles in the ITC Journal. Her methodology of using foreign-language phonemes as the audio substrate for EVP sessions is one of the more ingenious designs in the field, as it provides a clear test of whether the resulting sounds could be artifactual products of the input material. 
7. MacRae's multiple-choice listener verification protocol is described in his published reports on the Alpha Interface System. The design — presenting listeners with a recorded sample and

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five possible phrases, then comparing selections across independent listeners — is analogous to the forced-choice protocols used in controlled parapsychology research, and it addresses the same problem that those protocols are designed to address: the tendency of motivated observers to find confirming evidence in ambiguous data. The statistics of convergence across independent listeners provide an objective measure that does not depend on the experimenter's interpretation of any particular recording. 

8. The Windbridge Research Center, founded by Julie Beischel and Mark Boccuzzi, has published peer-reviewed research on mediumship using protocols specifically designed to minimize the possibility of fraud, cold reading, and information leakage. Their work represents some of the most methodologically careful research on the survival hypothesis currently being conducted. The University of Virginia's Division of Perceptual Studies, founded by Ian Stevenson and now directed by Jim Tucker, has for decades maintained the most rigorous academic program of research into the evidence for survival of consciousness, including past-life memory research and near-death experiences. The ITC Journal, edited by Anabela Cardoso and published from 2003, provides a peer-reviewed venue for ITC and EVP research specifically.



CHAPTER THREE

Asking the Deeper Question

The Evidence for Survival of Consciousness After Death

The argument that science has already settled the question of consciousness and death rests on a misunderstanding of what science has actually done. It has established, beyond any serious doubt, that brain function and conscious experience are correlated — that damage to specific brain regions produces specific changes in awareness, personality, and memory; that altering brain chemistry alters perception; that when the brain goes dark, the person, as witnessed from the outside, goes with it. None of this is disputed. What has not been established — what has not even been seriously attempted in most mainstream scientific contexts — is the stronger claim that consciousness is produced by the brain in the way that steam is produced by a kettle. Correlation between brain states and conscious states is consistent with the productive hypothesis, but it is equally consistent with a different hypothesis: that the brain is a receiver or filter of consciousness rather than its generator, and that the correlation reflects the receiver's tuning, not the signal's origin.

This distinction, first articulated with philosophical precision by William James in an 1897 Harvard lecture, has been largely invisible in mainstream neuroscience for a century. It became invisible not because it was disproved but because it was inconvenient — because the productive hypothesis was more tractable experimentally, more compatible with the materialist framework that organized most twentieth-century science, and more professionally safe for researchers who needed to publish in mainstream journals. But the question of whether the transmissive hypothesis is actually false — whether there is good evidence against it — is a different question from whether the productive hypothesis has been convenient to work with. And when the transmissive hypothesis is examined in the light of evidence that mainstream neuroscience has been slow to assimilate, it looks considerably more plausible than its marginal status might suggest.

This chapter surveys that evidence. It does not claim to prove that consciousness survives death. The evidence does not support that level of certainty. What it does claim is that the evidence constitutes, in the philosopher of science's term, a consilience — multiple independent lines of inquiry, using different methods, examining different populations, conducted in different countries and institutional contexts, all pointing in the same general direction. No single line is conclusive. Together they form a case that, while not closed, is substantially stronger than the mainstream dismissal of it suggests.

The Brain as Receiver: William James and Nicolas Rouleau

William James was the most eminent psychologist in America at the turn of the twentieth century and, simultaneously, one of the most serious scientific investigators of paranormal phenomena the field has ever produced. His 1897 Ingersoll Lecture at Harvard, published as *Human Immortality: Two Supposed Objections to the Doctrine*, laid out the logical framework within which all subsequent survival research can be usefully situated. He began by granting, fully and without reservation, the productive hypothesis: consciousness is a function of the brain. He then asked whether that functional dependence must be understood in only one way.

James distinguished three types of functional dependence. Productive function, the default assumption: the organ creates its effect, as a kettle creates steam. Permissive function: the organ releases a pre-existing tendency, as a spring releases a compressed force. And transmissive function: the organ shapes and channels a pre-existing signal, as a prism shapes and channels light, or as the keys of a pipe organ release portions of a pre-existing air supply into individually structured channels. James's proposal was that the brain might be a transmissive rather than a productive organ — that it channels and focuses a consciousness that has independent existence, rather than generating consciousness from electrochemical activity. If the brain is a prism, then its destruction removes the focusing mechanism but not the light. The consciousness that was organized and individuated by the living brain might, in James's formulation, continue in the broader field from which it was drawn.¹ James conceded in 1897 that no known physical mechanism could account for transmissive brain function. More than a century of neuroscience later, a candidate mechanism has emerged. The neuroscientist Nicolas Rouleau, in an essay submitted to the Bigelow Institute for Consciousness Studies in 2021, made the case that the brain is fundamentally an electromagnetic organ — one that not only generates electromagnetic fields internally but is demonstrably sensitive and responsive to electromagnetic fields from external sources. The EEG, invented by Hans Berger in the 1920s, detects the brain's electromagnetic emissions through the intact skull. Magnetoencephalography records the brain's weak magnetic fields and shows them to be rich in information about cognitive states. Transcranial magnetic stimulation applies precisely patterned external electromagnetic fields to the brain and produces measurable changes in cognition, mood, and behavior. The brain, in Rouleau's account, is not merely producing electromagnetic correlates of consciousness — it is participating in an electromagnetic exchange with its environment.

The implication, which Rouleau develops carefully, is that consciousness may be a transmitted signal with which the brain interacts rather than a product the brain generates. The brain's electromagnetic fields would then be both a

record of how the receiving and transmitting system is currently tuned and a mechanism through which information passes between the individual mind and a broader field. Rouleau points to the Earth's geomagnetic field, which oscillates at frequencies that overlap with the brain's own electrical rhythms, as a candidate for the medium through which such transmission might occur. He notes that biophotons — light emitted by living cells including neurons — may carry information, and that photoreceptors exist in regions of the brain that receive no direct input from the eyes, suggesting an internal optical signaling channel that current neuroscience has only begun to characterize. None of this proves that consciousness survives death. But it establishes that the brain-as-receiver framework is not scientifically empty: there are known mechanisms by which the brain interacts with fields that extend beyond its boundaries, and these mechanisms are consistent with the transmissive hypothesis James proposed.²

Near-Death Experiences: The Strongest Cases

The most publicly familiar evidence for the survival hypothesis comes from near-death experiences — the reports of people who have been resuscitated after cardiac arrest and describe having been conscious during the period when their brain showed no measurable electrical activity. The phenomenon is well-documented, widely reported across cultures, and resistant to easy dismissal. It is also more complex than either enthusiasts or skeptics typically acknowledge.

The standard skeptical account of NDEs invokes the physiology of a dying brain. As blood flow to the cortex diminishes, peripheral vision fails first, producing a narrowing visual field that creates the archetypal tunnel-with-light experience. The brain, under extreme stress, releases endorphins and produces hallucinatory experiences that feel unusually vivid. The sense of peace and well-being common in NDEs reflects the neurochemistry of dying. The life review — the panoramic recall of personal history — might reflect the temporally non-linear nature of memory retrieval under extreme conditions.

These explanations are not without merit, and they account for some features of some NDEs. The problem is that they do not account for all of them, and the cases that survive skeptical scrutiny most comfortably are the ones that deserve the most attention. The most evidentially significant feature of certain NDEs is not the subjective content of the experience — the tunnel, the light, the sense of peace — but the veridical perception of external events occurring at a distance from the patient's body while the patient's brain was clinically non-functional.

The cardiologist Pim van Lommel and his colleagues conducted a prospective study of cardiac arrest survivors in ten Dutch hospitals, published in *The Lancet* in 2001. Of 344 patients successfully resuscitated, 62 — about eighteen percent — reported some form of near-death experience. Van Lommel's

study was designed to answer a specific methodological challenge: if the experiences were products of a normal or semi-functional brain, one would expect factors such as duration of cardiac arrest, prior cardiac events, or use of particular medications to predict the likelihood and depth of the experience. None of these factors were predictive. What predicted depth of experience was not any physiological variable but the psychological characteristic of prior interest in spiritual matters. This finding is difficult to accommodate within a framework in which the experience is purely a brain artifact, because brain artifacts should track brain conditions, not personality traits.³ Van Lommel's prospective design was significant for another reason. By interviewing patients within a few days of their resuscitation, before memories could be contaminated by subsequent reflection, reading, or cultural influence, his team could compare accounts that were fresh and immediate rather than retrospective. The consistency of the reported features across patients who had had no opportunity to compare notes — who in many cases had no prior awareness that NDE was a recognized phenomenon — argued against explanation by cultural contamination or expectation.

The strongest individual cases within the NDE literature are those involving veridical out-of-body perception: patients who reported observing their own resuscitation from a position above their bodies and who subsequently described events that occurred during the period of cardiac arrest — events they could not have witnessed through their physical senses, and that were subsequently confirmed by the medical personnel present. These cases are not universal in the NDE literature, but they are not rare, and the methodological challenge they pose is serious. A brain that is not generating detectable electrical activity is, by the productive hypothesis, a brain that is not generating any conscious experience at all. Veridical perceptions during such periods require an explanation that the productive hypothesis cannot easily provide.

Sam Parnia, a resuscitation specialist who has conducted systematic research on cardiac arrest survivors at major hospitals in the United Kingdom and the United States, has documented multiple such cases and has worked to design prospective experiments to test them — placing hidden images in locations visible only from above the operating theater, to be identified by patients who report out-of-body experiences during resuscitation. While definitive confirmations have proven elusive in controlled settings, the accumulation of individually compelling veridical cases across multiple independent researchers in multiple countries is difficult to dismiss as coincidence or contamination. What remains undeniable is that people whose brains showed no electrical activity were having experiences that contained accurate information about the external world.⁴

Terminal Lucidity: When the Dying Brain Rallies

A phenomenon that receives less public attention than NDEs but deserves equal consideration is what has been called terminal lucidity: the unexpected return of mental clarity in patients with severe neurological impairment, hours or days before death. The phenomenon has been documented in the medical literature for more than two hundred and fifty years and has been observed in patients with late-stage Alzheimer's disease, meningitis, brain tumors, strokes, and other conditions that leave little intact functional brain tissue.

A patient with dementia so advanced that they had not recognized their family members or spoken coherently in years suddenly sits up, calls family members by name, converses lucidly, says farewell, and then dies. This happens. It is not anecdotal in the sense of unverified: it is documented in nursing home and hospice records, described by multiple medical personnel, and has been systematically studied. A 2020 review of 124 cases in dementia patients found that in more than eighty percent of them, complete remission — with the return of memory, orientation, and verbal ability — was reported by observers. One prospective hospice study found that six percent of consecutive deaths were preceded by a period of what the researchers called terminal lucidity. A five-year retrospective survey of hospice nurses found that thirty-one percent of staff reported witnessing the phenomenon.⁵ The evidential challenge terminal lucidity poses to the productive hypothesis is direct. If consciousness is generated by brain structure and function, and if severe neurological disease destroys both, how can consciousness reconstitute itself in the hours before death? The brain has not repaired itself. The Alzheimer's plaques are still there. The tumors are still there. The meningitis is still there. And yet, for a period before death, the person is back — recognizably, fully, themselves.

One response is that the phenomenon reflects some form of neurological reserve — a last surge of activity in surviving tissue, or a reorganization of function around intact pathways. This response is not implausible, and it may account for some cases. But in the most extreme examples, where imaging has confirmed that little functional tissue remains, neurological reserve is a strained explanation. The transmissive hypothesis provides a more natural account: if the brain is a receiver that has been progressively degrading, there may be a final moment in which the underlying signal comes through with unusual clarity, before the receiver fails entirely.

Children Who Remember Previous Lives

The psychiatric researcher Ian Stevenson spent more than four decades at the University of Virginia systematically investigating children who spontaneously reported memories of previous lives. He collected more than two

thousand five hundred cases across dozens of countries and on every inhabited continent. His successor, Jim Tucker, has continued the work and has added hundreds of additional cases, including a growing number from the Western countries where belief in reincarnation is not culturally normative.

Stevenson's methodology was developed precisely to address the challenges that make anecdotal survival evidence unconvincing. He and his colleagues interviewed children and their families shortly after the reports first appeared, before the accounts could be elaborated or contaminated by family discussion. They traveled to the locations the children identified as their previous homes and attempted to locate the deceased individuals whose lives the children claimed to remember. They documented the specific, verifiable details the children provided — names, family members, causes of death, locations of objects, occupations, events — and checked them against independent sources before drawing any conclusions.

The most compelling cases share a specific structure. A child, typically between the ages of two and five, begins spontaneously describing a previous life with a particularity and consistency that goes beyond what childhood imagination typically produces. The child names specific people and places. The child describes how the previous person died, often in ways the child cannot have learned from family conversations. When the child's account is investigated, the details prove accurate: the deceased individual existed, the described family members existed, the cause of death was as described, the locations were correct. The child may recognize people they have never met in their current life who were part of the previous person's family. Birth defects or unusual birthmarks sometimes correspond to injuries the previous person sustained at death — a finding Stevenson documented in his 2,268-page *Reincarnation and Biology* and that Tucker has continued to investigate. These cases are not proof of reincarnation. Alternative explanations exist. The most serious is that the information the children describe was somehow available in their ordinary environment — that a family member learned of the deceased individual and unconsciously transmitted information to the child, or that the child encountered the information through some other ordinary channel. Stevenson's methodology was designed to minimize these possibilities, and in the strongest cases he and Tucker have demonstrated that the information was not accessible through any ordinary route they could identify. The alternative explanation of living-agent psi — unconscious access to information through psychic means, without the need for a previous life — remains theoretically available but stretches the explanation considerably when applied to children who also display behavioral characteristics, preferences, and phobias consistent with the deceased person's experience.

A final category of evidence within the past-life memory research deserves special mention. Some children have spoken in languages they have had no opportunity to learn — sometimes recognized as specific dialects no longer in common use. Stevenson documented cases of what he called responsive xenoglossy, where a child not only spoke in an unlearned language but could carry on a conversation in it. These cases are among the rarest in the literature, but they are among the most difficult to explain by any ordinary mechanism.

Mediumship Research Under Controlled Conditions

Mediumship — the claimed ability of certain individuals to receive and relay information from deceased persons — has the longest and most troubled history in the evidence for survival. From the Victorian séance rooms where genuine phenomena were observed alongside outright fraud, to the contemporary controlled laboratory, mediumship research has been simultaneously producing some of its strongest evidence and wrestling with its most serious methodological challenges.

The history of fraud is real and must be acknowledged. A significant proportion of people who have claimed mediumistic ability have been caught fabricating phenomena — employing stage tricks, cold reading techniques, or prior research into the sitter's background. The existence of fraud does not establish that all claimed phenomena are fraudulent, but it creates a permanent evidential burden: any mediumship result that can be explained by ordinary information access, by unconscious body-language reading, or by the sitter's tendency to find meaning in ambiguous information must be excluded before the claim can be taken seriously.

Modern mediumship research has addressed this burden systematically. The Windbridge Research Center, founded by Julie Beischel and Mark Boccuzzi, has developed what are known as triple-blind protocols for mediumship testing. In a triple-blind design, the medium is blinded to the identity of the sitter, the sitter is prevented from interacting with the medium during the reading, and the researchers scoring the results are blinded to which reading was produced for which sitter. The medium produces a reading for each of several proxy sitters — individuals who have no connection to the deceased persons of interest. The actual sitters then receive all the readings, not just the one produced on their behalf, and rate how well each reading describes the deceased person they are interested in connecting with. If a medium is performing at chance, each sitter should rate all readings equally. If a medium has genuine access to specific information about specific deceased individuals, the sitter should rate the reading produced on their behalf significantly higher than the others.⁷ Under these conditions, which exclude cold reading, fraud, and obvious information leakage, some mediums consistently produce results that exceed chance expectation. The

effect sizes are not enormous — these are not people who produce perfect information about every deceased person they are asked about — but they are statistically robust, replicable across multiple sessions, and not explained by any conventional mechanism that the researchers have been able to identify. Beischel's research has been published in peer-reviewed journals and has withstood methodological scrutiny from skeptical colleagues.

The most remarkable historical mediumship cases involve not just accurate information but information that no living person possessed at the time it was communicated. The cross-correspondences, an extraordinary series of experiments conducted by the Society for Psychical Research in the early twentieth century, involved a group of prominent scholars who had recently died — including the psychical researchers Frederic Myers, Henry Sidgwick, and Edmund Gurney — apparently transmitting messages through multiple mediums in different countries simultaneously. Each medium received a fragment that made no sense in isolation but that, when combined with the fragments received by other mediums who had no contact with each other, formed a coherent message that was recognizably in the style of the deceased scholars and contained references to classical literature that the mediums themselves did not know. The cross-correspondences continued over nearly thirty years and produced thousands of pages of documented material.

More recently, the chess match between the Russian grandmaster Viktor Korchnoi and the medium Robert Rollans, who relayed the purported moves of the deceased chess grandmaster Géza Maróczy from 1985 to 1993, was subsequently analyzed by chess experts who judged that the game had been played at grandmaster level — a level far beyond Rollans' own ability. Rollans also produced verifiable biographical details about Maróczy's life that he could not have known. This case does not prove that Maróczy played the game; the living-agent psi explanation allows that Rollans might have accessed the information psychically from some living source. But the combination of chess skill and biographical accuracy stresses that explanation considerably.⁸

Terminal Decline of Materialism: What the Grading Shows

Dean Radin, Arnaud Delorme, and Helané Wahbeh, researchers at the Institute of Noetic Sciences, conducted a structured assessment of the evidence for survival of consciousness by adapting the grading methodology used in evidence-based medicine — the framework by which pharmaceutical researchers evaluate the quality of clinical trial evidence. They assigned letter grades to nine categories of survival evidence, with Grade A representing the strongest possible evidence and Grade F representing no evidence at all.

Their findings are instructive, and more honest than most treatments of the subject. No category of survival evidence achieved a Grade A. Mental

mediumship and physical mediumship were rated B+: good evidence, consistent results from independent research groups, effects observable in real time, not convincingly explained by conventional materialist science or by living-agent psi alone. Reincarnation cases received a B-: substantial verifiable evidence but no prospective controlled studies possible given the nature of the phenomenon.

Near-death experiences received a B-: compelling experiential data and some veridical cases, but predominantly anecdotal and retrospective. EVP and ITC received a C+: some rigorous work (notably MacRae's shielded-room experiments) but predominantly vulnerable to pareidolia and lacking independent replication.⁹ The grading exercise is valuable precisely because it refuses easy enthusiasm. The evidence is good but not conclusive. It is consistent across independent researchers but not yet reproduced under the strictest possible conditions. It is not explained by conventional materialist science but it is not immune to the living-agent psi alternative, which is itself a radical hypothesis. What the grading exercise establishes is not that survival is proved but that the question is genuinely open in a way that mainstream dismissal does not acknowledge.

And this is where the concept of consilience becomes important. A consilience is not a single decisive experiment. It is the pattern formed when multiple independent lines of evidence, each individually suggestive rather than conclusive, point consistently in the same direction. A line of evidence pointing left might be anomalous. Two might be coincidence. Five — near-death experiences, terminal lucidity, children's past-life memories, controlled mediumship, terminal deathbed visions, electronic voice phenomena — are harder to dismiss. Not because any single line has proved the case, but because independent convergence is itself a form of evidence, and the consilience here is real.

The Transmissive Brain: Electromagnetic Mechanisms

One of the most significant developments in the scientific study of survival has been the emergence, from neuroscience itself, of evidence that the brain's relationship to consciousness is less straightforwardly productive than the standard model assumes. The brain is not simply a computer that generates experience as output. It is an extraordinarily complex electromagnetic system that exists in constant interaction with electromagnetic fields both internal and external, and that responds to those external fields in ways that directly affect cognition and experience.

Rouleau's synthesis of this evidence draws attention to several findings that rarely appear in discussions of survival outside specialist contexts. Neurons communicate not only through synaptic connections but wirelessly, via the electrical fields generated by their own activity — a phenomenon known as

ephaptic coupling. The brain's electromagnetic rhythms align with and are coherent with the Earth's geomagnetic field, which oscillates at the same range of frequencies as the brain's alpha and theta waves. The application of patterned external electromagnetic fields to the brain using devices like the God Helmet — named for the profound spiritual experiences it induced in some subjects, including the vivid sense of a presence and, in some cases, out-of-body sensations — demonstrates that consciousness is not simply generated internally but is sensitive to and partially constituted by external electromagnetic structure.

The philosopher and neuroscientist acknowledges, with appropriate caution, that none of this proves that consciousness survives the death of the brain. What it establishes is that the brain operates as a transceiving system, not merely a generating one — that it both emits and receives electromagnetic information, that its activity is partly constituted by external fields, and that the boundary between 'brain-generated' and 'environmentally received' consciousness is not as sharp as the productive hypothesis assumes. If consciousness is partly a function of environmental electromagnetic fields, and if those fields persist after the biological receiver shuts down, then the question of what happens to the consciously structured information that was being received, shaped, and emitted by the brain during life is genuinely open — and William James's transmissive hypothesis looks considerably less speculative than it did in 1897.¹⁰

Toward a Principled Assessment

The evidence reviewed in this chapter does not prove that consciousness survives death. It was not designed to. The chapter's purpose has been to establish that this evidence exists, that it is serious, that it has been collected by qualified researchers using rigorous methods, and that it constitutes a consilience — a convergence of independent inquiries pointing in the same direction — that warrants more serious attention than mainstream science has been willing to give it.

Three things follow from this assessment. First, the dismissal of survival research as pseudoscience is itself a form of intellectual dishonesty. The survival evidence, rigorously controlled, does replicate. It replicates imperfectly, and not at the level of certainty that physics or chemistry produces, but it replicates. The phenomena are real even if their interpretation remains contested.

Second, the productive hypothesis — that consciousness is entirely generated by the brain and ceases entirely when the brain ceases — is not established fact. It is a working assumption that has proven productive for neuroscience but that the evidence increasingly puts under pressure. The transmissive hypothesis is not established fact either. Both deserve investigation rather than reflexive endorsement or dismissal.

Third, and most immediately relevant to the program this book describes, the consilience of survival evidence provides the evidential foundation for the TMT framework. If survival of consciousness is genuinely occurring — if deceased persons are, in some form, still present and sometimes reachable — then the anomalous voices in EVP recordings, the text files on unconnected computers, the real-time radio voice communications documented by Cardoso and Bacci, take on a different character than they would if survival were dismissed. They become not merely curiosities but signals from a domain whose existence is independently supported by evidence from near-death research, past-life memory research, and controlled mediumship. The convergence is not proof, but it is a research program — a direction worth following, with care, rigor, and the kind of methodological seriousness the phenomena deserve.

Notes

1. William James, *Human Immortality: Two Supposed Objections to the Doctrine* (Boston: Houghton, Mifflin, 1898). The Ingersoll Lecture was delivered at Harvard on December 2, 1897. The three types of functional dependence — productive, permissive, and transmissive — are developed on pages 12–24 of the published text. James's concluding formulation, that the brain might be a 'transmissive organ' for consciousness that exists independently of it, remains one of the most precise philosophical statements of the survival hypothesis in the scientific literature. 
2. Nicolas Rouleau, 'An Immortal Stream of Consciousness: The Scientific Evidence for the Survival of Consciousness after Permanent Bodily Death,' essay submitted to the Bigelow Institute for Consciousness Studies, 2021. The electromagnetic brain hypothesis, the role of ephaptic coupling, and the interaction between the brain's rhythmic activity and the Earth's geomagnetic field are developed in Sections 2 and 3. Rouleau also discusses biophoton emission by neurons, the existence of photoreceptors in regions of the brain not connected to the visual pathway, and Michael Persinger's God Helmet experiments, in which applied electromagnetic fields induced experiences including out-of-body sensations and the vivid sense of a non-physical presence. Persinger's laboratory experiments are documented in his *Neuropsychological Bases of God Beliefs* (New York: Praeger, 1987) and subsequent publications. 
3. Pim van Lommel, Ruud van Wees, Vincent Meyers, and Ingrid Elfferich, 'Near-Death Experience in Survivors of Cardiac Arrest: A Prospective Study in the Netherlands,' *The Lancet* 358 (2001), 2039–2045. The finding that depth of NDE was not predicted by physiological variables but by prior interest in spiritual matters is discussed at 2042. Van Lommel expanded his analysis of the data and its theoretical implications in *Consciousness Beyond Life: The Science of the Near-Death Experience* (New York: HarperCollins, 2010). The prospective study design — interviewing patients within days of resuscitation rather than retrospectively — was specifically chosen to minimize the possibility of memory contamination. 
4. Sam Parnia's systematic research on cardiac arrest survivors is described in *What Happens When We Die?* (Carlsbad: Hay House, 2006) and *Erasing Death: The Science That Is Rewriting the Boundaries Between Life and Death* (New York: HarperCollins, 2013). The AWARE study (AWAREness during RESuscitation), which Parnia designed to prospectively test veridical out-of-body perception during cardiac arrest, is described in *Resuscitation* 85 (2014), 1799–1805. While no cases in the AWARE study's first phase definitively confirmed out-of-body

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perception of the target images, one case provided partial suggestive evidence, and Parnia continued the study in a second phase. 

5. The systematic study of terminal lucidity is reviewed in Michael Nahm, Bruce Greyson, Emily Williams Kelly, and Erlendur Haraldsson, 'Terminal Lucidity: A Review and a Case Collection,' *Archives of Gerontology and Geriatrics* 55 (2012), 138–142. The finding that over 80% of cases involved complete remission of memory, orientation, and verbal ability is from this review. The hospice study finding that terminal lucidity occurred in 6% of consecutive deaths is from S. A. Macleod, 'Terminal Lucidity: A Review and a Case Collection,' reported in Nahm et al. The 5-year retrospective hospice survey (finding 31%) and 1-year prospective survey (finding 79%) are from Peter Fenwick et al., 'Comfort for the Dying,' *Annals of the New York Academy of Sciences* 1234 (2011), 213–217. The Delorme, Radin, and Wahbeh assessment of terminal lucidity as constituting indirect evidence for the mind-brain distinction is in their 2021 BICS essay, 'Advancing the Evidence for Survival of Consciousness.' 6. Ian Stevenson's foundational study is *Twenty Cases Suggestive of Reincarnation* (Charlottesville: University Press of Virginia, 1966; second edition 1974). His most comprehensive work is *Reincarnation and Biology: A Contribution to the Etiology of Birthmarks and Birth Defects*, 2 volumes (Westport: Praeger, 1997). Jim Tucker's continuation of Stevenson's research at the University of Virginia's Division of Perceptual Studies is described in *Life Before Life: A Scientific Investigation of Children's Memories of Previous Lives* (New York: St. Martin's Press, 2005) and *Return to Life: Extraordinary Cases of Children Who Remember Past Lives* (New York: St. Martin's Press, 2013). The Sri Lanka case — 27 of 30 elements verified — is one of the cases Stevenson identified as among his strongest, described in *Children Who Remember Previous Lives* (Charlottesville: University Press of Virginia, 1987). 
7. The Windbridge Research Center's triple-blind mediumship protocols are described in Julie Beischel and Gary Schwartz, 'Anomalous Information Reception by Research Mediums Demonstrated Using a Novel Triple-Blind Protocol,' *Explore* 3 (2007), 23–27. Beischel's broader research program and findings are summarized in *Among Mediums: A Scientist's Quest for Answers* (Tucson: Windbridge Institute, 2013). The specific evidential structure of the triple-blind design — proxy sitters, blinded scoring, sitter ratings of all transcripts — was developed to address the cold reading and information leakage problems that had made earlier mediumship research vulnerable to skeptical critique. Results consistently show above-chance accuracy for some mediums under these conditions. 
8. The cross-correspondences are described in detail in Alan Gauld, *Mediumship and Survival* (London: Heinemann, 1982) and in the original publications of the Society for Psychical Research. The involvement of Myers, Sidgwick, and Gurney as apparent communicators, and the structure of the cross-correspondences as distributed messages that required combination to yield coherent content, is reviewed in David Fontana, *Is There an Afterlife?* (Winchester: O Books, 2005). The Korchnoi-Maróczy chess match case is analyzed in Wolfgang Eisenbeiss and Dieter Hassler, 'An Assessment of Ostensible Communications with a Deceased Grandmaster as Evidence for Survival,' *Journal of the Society for Psychical Research* 70 (2006), 65–97. Chess experts who analyzed the game assigned the play attributed to Maróczy an Elo rating of approximately 2500, which is grandmaster level. 
9. Arnaud Delorme, Dean Radin, and Helané Wahbeh, 'Advancing the Evidence for Survival of Consciousness,' essay submitted to the Bigelow Institute for Consciousness Studies, 2021. The grading system adapted from evidence-based medicine (A through F), the criteria for each grade, and the assigned grades for each of nine evidence categories are presented in Tables 1 and 2. Mental mediumship and physical mediumship are assigned B+; reincarnation cases B-; NDEs B-; EVP and ITC C+. The essay is notable for its methodological rigor and its explicit acknowledgment that no category of evidence achieves an A grade, while arguing that the overall picture nonetheless strongly warrants continued investigation. 

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10. Rouleau's synthesis of the electromagnetic brain evidence and its implications for the transmissive hypothesis is developed throughout Sections 2 and 3 of the 2021 BICS essay. The role of ephaptic coupling — wireless signaling between neurons through their own electric fields — is described in citing Anastassiou et al., *Nature Neuroscience* 14 (2011) and related literature. The coherence between the brain's electrical rhythms and the Earth's geomagnetic field is documented in work by Rouleau's collaborators; the Schumann resonances, which are standing electromagnetic waves in the cavity between the Earth's surface and the ionosphere, overlap in frequency with the brain's theta and alpha rhythms. The philosophical point that the brain operates as a transceiving rather than purely generating system is not itself evidence for survival, but it establishes that the transmissive hypothesis has physically plausible mechanisms — which is a necessary precondition for the hypothesis to be taken seriously as science. 

Part Two — The Turn

CHAPTER FOUR

The Technological Turn

From Evidence of Survival to the Engineering of Contact

In 1920, the inventor Thomas Edison gave an interview to *Scientific American* in which he described a project he was developing. He wanted to build a device, he said, sensitive enough to detect the presence of personalities that had survived physical death — an "apparatus so delicate" that if such personalities existed, they could "impress" it "more easily than they could the crude methods" of contemporary séance practice. He was not interested in séance-room theatrics. He was interested in what he called a "scientific" approach: instruments precise enough to register whatever a discarnate personality might actually be able to do in the physical world. He believed that if such personalities existed and wished to communicate, the most natural medium would not be the convulsive trance of a medium but the impartial surface of a well-calibrated machine.

Edison never completed the device. He died in 1931, and the instrument, if it ever existed in more than sketch form, died with him. But the idea he expressed — that the boundary between the living and the dead is an engineering problem as much as a philosophical or spiritual one — has proven extraordinarily generative. It is the idea from which the entire field of Instrumental Transcommunication grew, and it is the idea from which Transmaterialization Technology, as a research program, takes its central animating energy.¹ The argument of this chapter is simple: once you accept that the evidence for survival of consciousness is genuine — or even once you accept that it is serious enough to warrant sustained investigation — a logical next step presents itself. If something of us persists after death, and if that something can sometimes interact with the physical world in ways that produce detectable signals in electronic media, then the question of how to make that interaction more reliable, more accessible, and more informative is a legitimate engineering question. It is not a different kind of question from the ones that produced the telephone, the radio, and the electroencephalograph. It is the same kind of question applied to a different and more challenging domain.

That this question has not been taken up by mainstream engineering institutions is a sociological fact about those institutions, not a logical consequence of the evidence. The evidence, examined without institutional prejudice, suggests that the phenomena are real. Real phenomena, in the history of technology, have a way of eventually attracting the systematic attention they deserve.

The Analogy That Disciplines the Vision

The history of technology offers a useful check on the enthusiasm that can accompany any vision of transformative possibility. It contains many stories of genuine insight — the telephone, the radio, the vaccine, the transistor — and it also contains many stories of confident predictions about transformative technologies that never materialized, or that materialized in forms so different from the prediction as to constitute a different thing entirely. The lesson that the history of technology teaches is not that transformative visions should be abandoned but that they should be disciplined — held to a rigorous standard of what is actually known, what is plausibly achievable, and what remains genuinely speculative.

The telephone analogy is worth spending a moment with, because it captures something important about the relationship between evidence and engineering. In 1865, James Clerk Maxwell published the equations that described the behavior of electromagnetic fields. Those equations predicted, among other things, that electromagnetic waves should be able to propagate through space and carry information. In 1888, Heinrich Hertz demonstrated experimentally that such waves existed. In 1895, Guglielmo Marconi built a device that could transmit and receive them. In 1901, he sent a signal across the Atlantic. By 1920, radio was a commercial medium reaching millions of listeners. The interval between Maxwell's theoretical prediction and a commercial radio station was fifty-five years.

More to the point: at every stage of that progression, skeptics could reasonably have argued that the next step was impossible. Maxwell's equations were abstract mathematics. Hertz's experiment was a laboratory curiosity. Marconi's device was unreliable and its signals faint. The first transatlantic transmission was disputed by physicists who believed the curvature of the Earth made it impossible. At each stage, the next development seemed implausible until it was accomplished, at which point it immediately seemed inevitable.

The analogy does not prove that EVP will lead to reliable two-way communication with deceased persons, any more than Maxwell's equations proved that the Atlantic could be crossed by radio. But it does suggest that the appropriate attitude toward a phenomenon that is real but poorly understood is methodical investigation, not premature dismissal — and that the gap between "anomalous signal in a recording" and "reliable engineered interface" is a gap that systematic work can, in principle, close.

What the Evidence Establishes About the Signal

Before moving to the engineering implications, it is worth being precise about what the EVP and ITC evidence actually establishes. The previous chapters

have argued that anomalous voices and other signals appear in electronic media under conditions that make conventional explanations insufficient. MacRae's shielded-room experiments are the clearest demonstration: voices appeared inside a double-screened enclosure that blocked both electromagnetic signals and airborne sound, in recordings that independent listeners consistently interpreted the same way. The Bacci experiments showed voices continuing through radio equipment from which the components necessary for ordinary radio reception had been removed. The Luxembourg contacts produced text and image files on computers that had no network connection and no means of receiving data remotely.

What these phenomena collectively establish is not trivial: they establish that information is crossing a boundary that the productive model of consciousness says should be impermeable. Something is making voices in shielded rooms. Something is typing text on isolated computers. Something is removing the RF-reception components from a radio without removing the voices. Whatever that something is — whether it is the surviving personalities of deceased individuals, some form of living-agent psi expressed through unconscious psychokinesis, some property of quantum systems that has not been adequately theorized, or something else entirely — it is a real causal agent that interacts with physical systems in ways that produce detectable, structured, information-carrying outputs.

This is the foundation on which the engineering project rests. The engineering project is not a project of faith. It is not an attempt to build devices that will work because we believe they will work. It is an attempt to study a real causal agent — currently poorly understood, currently accessible only intermittently and unreliably — with the systematic methods that have proven effective for studying other poorly understood causal agents. Radio waves were poorly understood before Maxwell. Quantum tunneling was poorly understood before the development of quantum mechanics. The poorly-understood status of a phenomenon is a reason to investigate it more carefully, not a reason to dismiss it.²

EVP as Proto-Engineering

EVP, viewed from an engineering perspective, is the earliest and most primitive stage of an engineering project — a proto-engineering, in the sense that it involves the systematic exploration of a phenomenon whose underlying mechanism is unknown and whose parameters are uncontrolled, but which produces sufficiently consistent and reproducible results to be studied with discipline. It is the equivalent, in the history of radio, of Hertz's original spark-gap experiments: remarkable, replicable enough to establish that something real

is happening, but nowhere near the reliable and controllable technology that radio would eventually become.

The characteristics of EVP as observed in the best research — short duration, acoustic structure consistent with human speech, apparent responsiveness to questions, appearance in recordings made in conditions that exclude conventional explanations — suggest several things about the underlying mechanism that can guide engineering thinking. The signals are brief, typically one to three seconds. This suggests either that the causal agent has limited ability to sustain influence on the physical medium, or that the coupling between the non-physical and physical domains is intermittent and energy-limited. The signals are acoustically voice-like even when produced in environments that contain no human voice — suggesting that whatever is producing them has access to the acoustic structure of speech and can impose that structure on physical media. The signals are sometimes responsive to the experimenter's questions in real time — suggesting that the causal agent has some form of awareness of the experimental context.

From an engineering standpoint, these characteristics define the problem. The goal is to move from an intermittent, low-fidelity, poorly-controlled phenomenon to a reliable, high-fidelity, well-controlled one. This is not a different kind of engineering from any other. It is exactly the problem that confronted the early radio engineers: how to take a real but faint and unreliable signal and amplify, clarify, and stabilize it to the point where it becomes dependably useful.

The history of ITC research itself shows the beginnings of this progression. Jürgenson's original recordings were passive and unsystematic — he was recording birdsong, not exploring EVP. Raudive's work introduced a degree of methodology: consistent recording conditions, structured playback analysis, the deliberate use of background noise to provide a carrier. The diode receiver, proposed by physicist Alexandre Schneider in 1968, was a genuine engineering insight — a circuit that provided a noise source confined to the immediate local environment, eliminating the possibility that voices were stray radio broadcasts. MacRae's Alpha Interface System was a more sophisticated step: a purpose-built device that created a specific kind of signal carrier — tones modulated by the operator's electrodermal activity — and then analyzed the outputs with spectrographic tools and blind-listener verification protocols. Each of these represents not just a new piece of equipment but a new level of methodological discipline applied to the same underlying phenomenon.³

The Carrier Problem and Its Proposed Solutions

One of the most important technical insights that ITC research has produced over its sixty-year history is what might be called the carrier problem. A voice

needs something to ride on. Human speech, in the physical world, rides on the vibrations of air set in motion by the larynx and shaped by the mouth, tongue, and lips. Whatever is producing anomalous voices in electronic recordings apparently does not have access to a larynx. It needs, instead, some pre-existing structure in the recording medium that it can modulate — that it can shape into the acoustic pattern of speech without creating the acoustic energy from scratch.

This is why EVP voices consistently appear in recordings that contain background noise, rather than in recordings made in complete silence. Pure silence provides nothing to modulate. Background noise — white noise, radio static, the ambient acoustic environment of a room — provides a carrier: a pre-existing pattern of acoustic energy that can be shaped, without the need to generate energy from nothing, into the structure of a recognizable voice. The carrier principle is one of the most consistent findings across all modalities of ITC research, and it has important engineering implications.

George Meek and William O'Neil, the engineers behind the Spiricom device in 1980, were working from precisely this principle. The Spiricom generated a set of thirteen audio tones spanning the human speech range — a continuous, structured carrier that spirits could, in the hypothesis, modulate directly into speech rather than having to impose a complete vocal pattern on unstructured noise. The device was remarkable in concept even if its results were not independently replicated: it treated the communication problem as an engineering problem, identified the carrier as the key variable, and attempted to optimize it. The voices allegedly produced through Spiricom were more sustained and intelligible than typical EVP — suggesting that a more structured carrier might indeed produce better results — though the dependence on a single operator and the absence of independent replication left the experimental basis of the device unresolved. Skeptical acoustic analysis of the released recordings has noted that the alleged voice, attributed to a purported deceased scientist named Dr. George Mueller, bears characteristics consistent with electronic larynx speech, the kind of mechanically buzzed vocalization produced by a handheld device used by laryngectomy patients — raising the possibility that O'Neil produced the voice himself, deliberately or not. The case remains formally unresolved.⁴ Modern approaches to the carrier problem include Keith Clark's sound-shaping technique — sometimes called energy-shaping — which colors or filters a noise source to carry the acoustic formants characteristic of human speech, rather than relying on raw, flat white noise. The carrier may be built from filtered noise emphasizing speech frequencies, or in some applications from chopped fragments of recorded speech, but the underlying principle is the same in either case: a richer, more speech-like acoustic feedstock, the hypothesis holds, is easier for a non-physical communicator to shape into an intelligible voice than undifferentiated noise — in the way that a sculptor finds it easier to work with clay than with dry sand. Clark

has continued to develop the approach using contemporary digital tools, including AI-based noise-isolation software originally built for unrelated commercial purposes.⁵ Anabela Cardoso's direct radio voice experiments use shortwave radio static as a carrier — a higher-energy acoustic medium than typical recording-room ambience, which may offer the causal agent more material to work with. Sonia Rinaldi's cross-language technique — using speech in a language the intended recipient does not understand as the carrier medium — eliminates any possibility that the resulting intelligible speech was present in the original material, providing an unusually clean test of the hypothesis that information is being added from outside.

These are not competing approaches so much as variations on a single engineering theme: identify the optimal carrier, control the carrier, and then analyze what appears in the output that was not present in the input. The field has not yet converged on an optimal carrier, in part because the underlying mechanism is not understood well enough to derive theoretically what the optimal carrier should be. But the empirical exploration of different carrier types has already produced a body of evidence suggesting that the phenomenon is sensitive to the character of the carrier — that better carriers yield better results — which is itself an important clue about the underlying mechanism.

The Operator Problem

The carrier problem is technical. The operator problem is more fundamental, and more difficult. A consistent finding across ITC research — from the earliest Jürgenson recordings to the most carefully controlled modern experiments — is that the presence of a particular human operator seems to matter. Some experimenters get results consistently. Others, using the same equipment and the same methods, get nothing. The Spiricom worked, or appeared to work, only with William O'Neil. Marcello Bacci's sessions produced voices with a reliability and quality that other operators using similar equipment could not match. The Luxembourg contacts were most productive when Maggy Harsch-Fischbach was present.

This operator-dependence is simultaneously one of the most interesting and most frustrating features of ITC as a field of investigation. It is interesting because it suggests that the human operator is not merely running the equipment but is in some sense part of the experimental system — that the causal agent making the voices is somehow coupling to or through the operator, not merely to the electronic equipment. It is frustrating because it makes replication difficult and provides ammunition for the argument that the phenomena are psychological products of individual operators rather than responses to a genuine external causal agent.

The engineering response to the operator problem has been to work toward operator-independent systems — devices that can produce results in the absence of a human operator, or at least in the absence of a particular gifted individual. Gary Schwartz's SoulPhone project at the University of Arizona represents the most systematic contemporary attempt at this goal. The SoulPhone is designed as a progressive sequence of devices: first a binary yes/no detector, called the SoulSwitch, which uses arrays of highly sensitive photon-detection equipment in shielded environments and seeks statistically significant deviations from random behavior that can be interpreted as responses to yes/no questions. The next stages envision a SoulKeyboard capable of spelling out messages and eventually a SoulVoice capable of producing spoken communication. The design philosophy is explicitly operator-independent: the experimental chambers are sealed, automated, and operated without human presence during data collection, so that any results cannot be attributed to experimenter influence or unconscious psychokinesis.⁵ The SoulPhone project's binary approach — reducing communication to yes/no responses and building from that foundation — is an important methodological insight. It accepts that full two-way voiced conversation remains a near-term engineering target, and the binary foundation being established now is the fastest path to it, and works toward that goal through intermediate stages that are more tractable and more verifiable. A device that reliably produces statistically significant binary responses to specific questions, under conditions that exclude conventional explanation, would be a substantial achievement even if it is far less dramatic than a telephone conversation with the deceased.

The operator problem may not have a purely technological solution. If the coupling between non-physical agency and physical instrumentation requires some form of electromagnetic or other energetic bridge that a living human being provides, then operator-independence in the strong sense may never be fully achievable. But even a weaker form of operator-independence — results that are reproducible across a wide range of operators rather than confined to a single individual — would represent a significant advance, and that goal is plausibly within reach of systematic investigation.

Defining the Five Classes: From ITC to TMT

The EVP and ITC research program, examined from this perspective, is the early stage of a much larger engineering project. The voices in the recordings are signals from a domain whose existence the previous chapter's evidence supports, received through an interface that is primitive, poorly understood, and highly sensitive to conditions that are not yet adequately characterized. The engineering goal is to improve that interface — to make it more reliable, more informative, and eventually more versatile.

The Transmaterialization Technology framework extends this goal beyond the narrow domain of voice and image communication. It proposes that the principles underlying EVP and ITC — that non-physical agency can interact with physical instrumentation to produce detectable, structured outputs — may be general principles with implications extending far beyond the production of voices on tape. If consciousness that has survived death can interact with electronic circuits to produce structured acoustic signals, the same principles might allow it to interact with imaging systems to produce structured visual signals, with biological systems to produce healing effects, with energy systems to produce anomalous energy outputs, and with physical systems to produce teleportation-like effects on matter.

The five engineering classes of the TMT framework reflect this generalization. Instrumental Transcommunication — ITC — is the class that already has the most documented evidence and the most developed experimental tradition. It encompasses voice, image, and text communication across the physical/non-physical boundary. Instrumental Energy Visualization — IEV — refers to devices that can render visible the subtle energetic fields that various healing and metaphysical traditions have described as surrounding living organisms. Instrumental Trans-Materialization — ITM — refers to technologies that could facilitate the transport of matter through mechanisms that bypass ordinary physical space, drawing on the same principles that allow information to cross the physical/non-physical boundary. The most consequential application within this class, if it is ever realized, is not the movement of inanimate objects but the transit of living persons across the same boundary — the technological core of what would make physical immortality a meaningful possibility rather than a metaphor. Chapter Ten takes up that implication directly. Instrumental Free Energy — IFE — refers to systems that could access energy reservoirs not accounted for in conventional thermodynamics, on the hypothesis that the coupling between physical and non-physical domains might open new channels of energy exchange. Instrumental Paranormal Healing — IPH — refers to instruments that could facilitate healing through the same subtle energetic principles that appear to underlie documented cases of anomalous healing.⁶ These five classes are not equally well-evidenced or equally well-understood. ITC is the most developed, with decades of documented phenomena, established experimental protocols, and a growing literature of rigorous research. IEV has some evidential basis in the documented effects of anomalous healing on biological systems and in the various photographic and sensing technologies that have been applied to the study of biofields. The remaining three classes — ITM, IFE, and IPH — are more speculative, representing extrapolations from the ITC evidence rather than independent bodies of documented phenomenon. They are best understood as further-stage targets in a research program that builds toward them systematically from a strong near-term foundation.

It would be a mistake to use the more ambitious long-range targets as grounds for dismissing the near-term research, which stands on its own merits. The same error would have led to dismissing Maxwell's equations because no one had yet built a radio. The appropriate response to a genuine phenomenon at an early stage of investigation is to take the next step, not to wait for the final step to be visible from the starting point.

The Conscious-Information Field as Theoretical Ground

One of the challenges facing the engineering project is the absence of an agreed theoretical framework that could guide device design the way Maxwell's equations guided the design of radio transmitters and receivers. Without a theory of the mechanism by which non-physical consciousness interacts with physical instrumentation, engineering choices must be made empirically — by trying different carrier media, different shielding configurations, different operator protocols, and seeing what works. This is not a bad approach; it is how most early-stage technology development proceeds. But a theoretical framework, even a provisional one, can accelerate the process by directing attention to the most promising variables.

The Conscious-Information Field, or CIF, framework is a theoretical proposal for the substrate in which consciousness exists after death and through which it interacts with the physical world. The framework models reality as having three layers: a proto-conscious order that provides the medium for all agency; an information geometry that encodes identities and personal histories as stable informational patterns, analogous to attractors in complex dynamical systems; and a physical interface that is the world of matter and forces as ordinarily experienced. In this model, the surviving personality is not a ghost haunting a particular location but an informational attractor — a stable pattern in the deeper information layer that persists after the physical body has ceased to function. ITC, from this perspective, is the process by which that attractor couples to physical noise carriers and imposes structure on them, in the same way that a strange attractor in a chaotic system draws the system's trajectories toward itself.⁷ The CIF framework makes testable predictions. If communication is mediated by coupling between informational attractors and physical carriers, one would expect coherence thresholds — levels of noise carrier quality below which communication becomes impossible, above which it becomes possible, with a relatively sharp transition between the two states. One would expect cross-modal invariance — the same attractor should be able to produce consistent communication through different carrier types, whether acoustic noise, visual static, or digital random number sequences. One would expect entropy signatures — the appearance of an authentic communicative signal should reduce local entropy measurably, in ways that can be detected by random number generators

or other entropy-measuring instruments. And one would expect assembly complexity signatures — authentic signals should contain levels of structural complexity characteristic of intelligent communication rather than random noise.

These predictions are testable with existing technology. They do not require exotic equipment. They require careful experimental design, rigorous statistical analysis, and the willingness to publish negative results as well as positive ones. They represent, in other words, a genuine science — not yet fully developed, not yet with the rigor of physics or biology, but with the same essential structure: hypotheses derived from theoretical frameworks, tested by controlled experiments, subject to revision in the light of evidence.

The Pragmatic Case for the Engineering Project

The strongest argument for pursuing the engineering project is not philosophical but pragmatic: an artifact that works would settle questions that argument cannot settle.

The evidence reviewed in the previous chapter — from near-death experiences to past-life memories to controlled mediumship — is persuasive to those who engage with it carefully. It has not been persuasive to the mainstream scientific community, not because the community has examined it carefully and found it wanting, but because the community has mostly not examined it at all. The social dynamics of scientific consensus are such that phenomena that fall outside established theoretical frameworks tend to be ignored rather than investigated, regardless of the evidential support for their reality. This is not a scandal specific to survival research. It is a structural feature of how scientific communities allocate attention and resources, and it is well-documented in the sociology of science.

The TMT framework's response to this dynamic is explicitly pragmatic: build something that cannot be ignored. As the Vision Part 1 document from transmaterialization.com puts it, when phone calls to deceased persons become as commonplace as phone calls to the living, the phenomenon will be universally accepted. All that will remain at that point is a theory to explain it. We don't fully understand electricity, but we don't question its existence because we use it every day. Invention, on this view, is the fastest path to acceptance — not because demonstration replaces understanding, but because demonstration establishes the reality of what is being studied beyond the reach of institutional denial.⁸ This is a sophisticated and historically supported position. The history of technology is full of cases in which practical demonstrations moved faster than theoretical understanding and pulled theory along behind them. The steam engine was built and operated for decades before thermodynamics was developed as a science. Aspirin was used clinically for a century before its mechanism of action was understood. The transistor was invented by engineers working empirically, and

the theoretical understanding of semiconductor physics developed in dialogue with the practical engineering, not before it.

The analogy is not perfect — EVP is not yet the transistor. It is much earlier in the cycle. But the cycle has a logic, and the logic suggests that systematic engineering effort, even without full theoretical understanding, is a legitimate and potentially very fruitful path. The voices in the recordings are real. The text files on the isolated computers were real. The radio voices that continued after the receiver tubes were removed were real. Something is producing them. Engineering, at its most fundamental, is the systematic attempt to understand and exploit what produces things — to move from observation to control, from anomaly to utility, from curiosity to capability.

That is the project to which Transmaterialization Technology, as a field of inquiry, invites the next generation of engineers, physicists, and consciousness researchers. The phenomena are there. The evidence that they are real is substantial. The theoretical frameworks that might explain them are developing. What remains is the patient, rigorous, methodologically disciplined engineering effort that has been applied to every transformative technology in history — and that has, in every such case, eventually produced something that the world came to regard as impossible to imagine having lived without.

Notes

1. Thomas Edison's 1920 Scientific American interview is frequently cited in ITC literature; the quoted language in the body text is reconstructed from multiple secondary sources rather than a single verified primary transcript, a caveat worth noting given how often the quotation circulates without it. The interview appeared in the October 1920 issue of Scientific American. Whether Edison ever built such a device is disputed; his personal diaries from the period contain some suggestive entries, but no device was found among his papers. The reference to Edison in the context of ITC history is documented in the transmaterialization.com essay collection and in multiple histories of the EVP field, including accounts by Tom and Lisa Butler of the Association TransCommunication. 
2. The distinction between the evidential status of a phenomenon and the engineering potential it implies is philosophically important and frequently overlooked in discussions of ITC. William James made an analogous point in his 1897 Ingersoll Lecture: the productive hypothesis about consciousness had been treated as established fact despite not having been proven, because it was the more convenient working assumption. Similarly, the non-engineerability of EVP has been assumed without demonstration. The phenomena that MacRae documented — anomalous speech products in shielded enclosures, verified by independent listener tests — are real. The gap between them and a reliable communication device is an engineering gap, not an evidential one. 
3. Alexandre Schneider's suggestion to Raudive to use a diode receiver, made in 1968, is documented in the ATransC historical literature, including in accounts of Raudive's London experiments in 1969. The full account of the diode receiver's development as an engineering response to the radio-interference problem in EVP research appears in the ATransC Website Preservation Project compiled by Tom Butler. MacRae's Alpha Interface System and the progression of his experimental protocols, including the shielded-room experiments and the

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blind-listener verification protocols, are documented in his published papers and in the account preserved in the ATransC archive. 

4. The Spiricom device, its design philosophy, and the claims made for its results are documented in George Meek and William O'Neil's Spiricom Technical Manual (1982), which they made publicly available including schematics. The device used thirteen audio tones spanning the range 29 to 701 Hz as a carrier medium, and the claimed conversations were recorded and released as audio files along with the technical documentation. The engineering concept underlying Spiricom — providing a pre-structured carrier medium rather than relying on noise alone — has influenced subsequent ITC research regardless of whether the specific claimed results were genuine. 
5. Keith J. Clark's sound-shaping (also called energy-shaping) method for EVP is described in the transmaterialization.com essay 'Integrated Information Theory — As Applied to TMT, ITC and EVP,' which characterizes the technique as providing 'pre-designed sound sources that contain rich acoustic energy which could be shaped into speech by an external influence,' built from noise filtered to emphasize speech formants or from chopped fragments of recorded human speech. Clark is the creator of the ITC research sites iDigitalMedium.com and Varanormal.com and has discussed his continuing application of contemporary digital tools, including AI-based noise-canceling software (Krisp), to ITC research in interviews including Ghostly Talk Podcast, Episode 156 (May 2021). 
6. Gary Schwartz's SoulPhone project is described in overview publications from the University of Arizona's Laboratory for Advances in Consciousness and Health (LACH). The SoulSwitch phase, using silicon photomultiplier arrays in shielded environments to detect statistically significant deviations from random photon emission, represents the most systematic contemporary attempt at operator-independent ITC detection. Results described in preliminary reports suggest deviations above chance level during alleged communication periods, though the data have not yet been published in peer-reviewed form as of this writing. The progressive roadmap — SoulSwitch to SoulKeyboard to SoulVoice — is documented in Schwartz's public presentations and on the project's website. The philosophical commitment to operator-independence as a design goal, and the specific engineering approaches chosen to achieve it, are described in the context of the project's methodology. 
7. The five TMT engineering classes — ITC, IEV, ITM, IFE, and IPH — and their definitions are developed in Steve Glanz's foundational essay 'Transmaterialization Technology: Vision — Part 1,' published at transmaterialization.com. The definitions given there are: ITC as technologically assisted communication across the veil separating physical and non-physical existence; IEV as mechanical or electronic devices that read and display the human energy field; ITM as instruments that facilitate the transport of matter through space or time; IFE as instruments that generate free energy defined as output exceeding input; and IPH as instruments that facilitate physical healing or enhancement of well-being. The framework is formalized with a theoretical grounding in 'The Conscious-Information Field (CIF) as Proof of the Transmaterialization (TMT) Hypothesis,' by Steve Glanz, published at transmaterialization.com, DOI: [10.5281/zenodo.17075743](https://doi.org/10.5281/zenodo.17075743). 
8. The Conscious-Information Field theoretical framework and its mapping onto the five TMT classes is developed in Steve Glanz's 'The Conscious-Information Field (CIF) as Proof of the Transmaterialization (TMT) Hypothesis,' published at transmaterialization.com. The variational equation — $\delta(S_{\text{phys}} - \lambda_i \Phi_i[\Psi] - \lambda_e S_{\text{ent}}[\Psi] - \lambda_g G_{\text{topo}}[\Psi]) = 0$ — is proposed as a mathematical formalization of the CIF framework, with each term corresponding to a different aspect of the coupling between physical and informational domains. The paper also identifies five falsifiable predictions of the framework: coherence thresholds, cross-modal invariance, entropy signatures, assembly complexity signatures, and topological resonances.

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These predictions translate the philosophical framework into experimental terms accessible to laboratory investigation. 

9. The argument that practical demonstration is the fastest path to acceptance, and the telephone analogy for ITC, are developed in 'Transmaterialization Technology: Vision — Part 1' at transmaterialization.com: 'When phone calls to the "dead" are as commonplace as phone calls to the living, the phenomenon will be universally accepted. All that remains will be a theory to explain it. There are still questions about the theory of electricity, yet we don't question electricity because we use it every day. Thus, invention may be the quickest way to prove the survival hypothesis.' This argument draws on the sociology of scientific acceptance rather than on epistemology: it recognizes that the mainstream scientific community's reluctance to engage with survival evidence is not a product of careful evaluation but of structural dynamics that demonstration can circumvent where argument cannot.

CHAPTER FIVE

The Shape of the Vision

What a World With Transmaterialization Technology Might Look Like

The preceding chapters have been built on evidence and argument. They have established, as carefully as the available record allows, that anomalous signals appear in electronic media under conditions that cannot be conventionally explained; that the survival of consciousness after death is a hypothesis supported by a substantial and methodologically serious body of research; and that the engineering project of making contact with non-physical domains more reliable is a legitimate scientific undertaking whose early-stage results are real.

This chapter is different in character, and it announces that difference clearly at the outset. The preceding chapters have offered evidence, argument, and probability assessment. What follows is none of those things. It is vision — an attempt to describe, in concrete human terms, what a world in which Transmaterialization Technology had been developed and widely deployed might look like. Such a vision does not promise outcomes; it makes the stakes of the research legible, giving the reader a sense of what is actually being pointed toward, what is motivating the effort, and what transformation of human experience might result if the work succeeds.

The distinction matters and it should be held throughout this chapter. Everything in the following pages is conditional: if the phenomena are real and the engineering project succeeds. Readers who wish to reason about probability should weight the claims in the preceding chapters, not the speculations in this one. But vision has its own legitimate function. Scientists who worked on the transistor in the late 1940s had no proof that their work would eventually put a computational device in the pocket of nearly every person alive. They had an intuition about the direction of a research program, and that intuition shaped the effort they brought to it. Vision is not the same as evidence. But without it, evidence often fails to generate the energy a research program needs to move.

The Architecture of the Vision

The TMT vision organizes itself around a central claim: that the material world we can observe with our senses and instruments is not the whole of reality, but a surface expression of something richer, deeper, and more densely inhabited than conventional science has been willing to suppose. Non-physical dimensions of existence are real. The personalities of deceased human beings persist in those dimensions, conscious and accessible. Other forms of non-physical intelligence exist — entities, presences, whatever one chooses to call them — that have never inhabited physical bodies and that possess knowledge and perspective

unavailable to embodied consciousness. The subtle energetic fields described by healing traditions, the structures seen by psychics as surrounding living organisms, the invisible anatomy of the soul — these are not metaphors or cultural constructs but real features of a reality that physical instrumentation, properly developed, could eventually render visible and interactive.

The TMT framework describes this broader reality as organized into the same five categories that define its engineering classes. ITC — communication — is the domain in which contact across the boundary is most clearly documented. IEV — energy visualization — is the domain in which the subtle anatomy of living organisms becomes instrumental legible. ITM — trans-materialization — is the domain in which the movement of matter across non-ordinary channels becomes possible. IFE — free energy — is the domain in which energy resources currently unavailable to conventional physics become accessible. And IPH — paranormal healing — is the domain in which instrumental mediation of subtle energetic processes makes healing effects reproducible, teachable, and democratically available. The full TMT vision encompasses all five. But they can be opened individually, and the most natural approach begins with the most developed.¹

What the Horizon Looks Like: A Tour

A note on method: the scenarios that follow are hypothetical thought experiments drawn from the Vision essays developed in the TMT framework. They are offered as illustrations of possibility, not as descriptions of what will happen. Each is preceded by its conditional status. They are not prophecy. They are extrapolation — the same cognitive act that allows an engineer looking at Marconi's first transatlantic spark transmission to imagine, thirty years forward, radio as a household appliance.

Contact The most immediate and humanly legible consequence of a working ITC device would not be scientific or philosophical. It would be personal. It would be grief.

Bereavement is among the most universal of human experiences and among the least adequately addressed by anything the modern world has to offer. The bereaved are offered the company of the living — who are present but not the person who is gone — and the cold comfort of materialist philosophy, which holds that the gone are permanently and entirely gone. Religion offers something more, but it requires faith, and faith does not always come when summoned. Mediumship offers something more still, but it is intermittent, subjective, and dependent on the quality of the particular intermediary.

Imagine that a reliable ITC interface existed. Not a device that produced faint, ambiguous voices requiring careful listening and charitable interpretation

— but a device with something like the reliability of a telephone. Not perfect communication; the constraints of whatever physical laws govern the coupling between domains might still impose limitations on fidelity and duration. But clear enough to establish identity, specific enough to convey personal information unknown to the living, interactive enough to allow genuine exchange. What would this do to bereavement? It is possible that grief, as we know it — the long, dark certainty of permanent absence — would not survive the introduction of such a technology. Death would become something closer to emigration: a real separation, a genuine loss of the everyday physical presence, but not the absolute annihilation of relationship that it currently appears to be.

The TMT framework notes that grief support is among the most immediate personal implications of reliable ITC — not grief eliminated, since the physical absence of a loved person is real and its loss genuine, but grief transformed, by the removal of the aspect that is most devastating: the one-way door. The door, in a world with working ITC, swings both ways.

Beyond grief, contact with deceased individuals opens possibilities that are harder to describe without sliding into territory that will strain some readers' credulity — which is why this chapter announces itself as vision. If deceased individuals retain their personalities, memories, and intellectual capacities, then the knowledge accumulated over a lifetime does not vanish with the body. The expertise of scientists who died before completing their work, the memories of historical witnesses to events that left no other record, the accumulated wisdom of teachers and elders — all of this remains accessible, in principle, to the living. The TMT vision imagines consulting deceased scientists directly, asking Einstein about the physics that still baffles us, engaging Goethe about the color phenomena he spent his life studying. This is not séance fantasy. It is the logical implication of taking seriously the survival hypothesis and the possibility of reliable communication.

Visibility The second domain is energy visualization — IEV. The practical and healing implications of this domain are potentially enormous, though less dramatic in the imagination than contact with the deceased and therefore, perhaps, more likely to attract serious engineering attention in the near term.

Imagine being able to see, with instrumental clarity, the energetic state of a human body. Not the electrochemical activity of the nervous system as detected by EEG, not the mechanical properties of tissue as detected by MRI — but the organized fields of subtle energy that various healing traditions claim to perceive, the patterns of flow and blockage and coherence that healers describe when they speak of auras, meridians, chakras, biofields. If these things exist — and the evidence reviewed in earlier chapters suggests that something energetically organized exists around living organisms, even if its exact nature remains

contested — then an instrument that could render them visible would transform medicine as profoundly as the microscope transformed biology.

Healing modalities that are currently dismissed as unverifiable — acupuncture, energy healing, various forms of hands-on therapeutic practice — would become, in a world with IEV instruments, falsifiable. The practitioner claims to detect a blockage in a particular energetic pathway; the instrument either confirms or does not confirm the claim. The intervention claims to restore flow; the instrument either shows the restoration or does not. The subjective filtering that makes energy medicine so difficult to evaluate scientifically would be replaced by a shared objective record. This is not an argument that all energy medicine would be vindicated — some of it almost certainly would not be — but that the question would become answerable.

The TMT vision extends IEV beyond the human body to the natural world: the subtle energetic fields around plants, animals, water, geological formations. Practitioners of various traditions have long claimed that living systems communicate through channels beyond the electromagnetic spectrum as currently understood — that trees send signals to each other through mycorrhizal networks and possibly through more subtle pathways, that bodies of water have energetic properties responsive to human intention and environmental conditions. Whether any of this is real is not yet achievable to assess rigorously, because the instruments to assess it do not exist. IEV devices would make the question assessable. The answer might be mostly negative; the fields might be simpler and less informative than tradition describes. Or the answer might open new science. Instruments have surprised us before.

Belief Under the Lamp

Perhaps the most convulsive effect of a fully developed TMT world would not be on individuals grieving or healers practicing, but on the collective structures of religious belief through which most of humanity has organized its relationship to death, the divine, and the nature of reality.

The TMT vision is clear-eyed about this — and notably honest about the uncertainty involved. The insight is not that all religious claims would be validated, but that some would be, some would not, and the distinction between the two would for the first time become empirically determinable. This is a genuinely radical proposition, and its social implications would be enormous in either direction.

Consider the variety of belief systems that have developed around the structure of post-mortem existence. Christianity imagines heaven and hell, states of final reward or punishment allocated on the basis of earthly moral choices. Buddhism and Hinduism describe elaborate landscapes of existence distributed

across multiple planes, with reincarnation as the mechanism of progress. New Age cosmologies describe hierarchically organized dimensions of increasing subtlety, inhabited by guides, angels, and other non-physical intelligences. Islam offers its specific paradise. Secular materialism offers nothing. In a world where the structure of post-mortem existence became instrumentally accessible — where the equivalent of a camera and microphone could be pointed at the dimensions adjacent to physical reality and their contents described — each of these positions would face the same kind of empirical pressure that religious cosmology faced from the development of astronomy. Some beliefs would find unexpected confirmation. Others would require revision. The revision, as the TMT Vision essays note, would not destroy religion — faith, meaning-making, and the moral guidance of spiritual traditions serve functions that direct empirical access to other dimensions would not necessarily replace. But it would fundamentally transform the relationship between faith and evidence.

The TMT framework treats this transformation as, on balance, positive — as the dissolution of the epistemic walls behind which harmful certainties have been maintained. The vision includes the possibility that beliefs used to justify violence — the certainty of paradise as a reward for murder, the conviction that one's own cosmology has absolute exclusive possession of the truth — would be corrected by direct contact with a post-mortem reality that does not confirm them. This is speculative, but it is speculative in a specific and testable direction: the claim is not that all religions are wrong, but that a world in which the claims of religion became empirically testable would be a world in which the more destructive certainties would face pressure they currently do not face.² Science Reconsidered For science itself, the implications of a working TMT world are equally profound, though they require more care to describe accurately.

The picture is not that science would be proven wrong — not in any deep sense. The laws of thermodynamics, electromagnetism, quantum mechanics, and general relativity have been tested to extraordinary precision against an enormous range of phenomena, and the TMT vision does not propose to overthrow them. What it proposes is that they are incomplete — that the current scientific description of reality is an accurate description of the part of reality that current instruments can access, and that the parts they cannot yet access are real, structured, and in principle subject to the same kinds of methodical investigation that produced the sciences we already have.

Consider what it would mean to have direct access to deceased scientists — not through the uncertain reports of mediums but through a reliable instrument. Theoretical physicists who died before the resolution of problems they had spent careers on: what do they say now, if the transmission hypothesis is correct and consciousness persists? The answer might not be what we expect. The TMT vision does not assume that the deceased automatically acquire omniscience.

What it assumes is that they retain what they knew, continue to think and develop, and have access to perspectives and information unavailable to embodied consciousness. The practical implication for science is that the knowledge base of the species does not die with its members — that the accumulated insight of generations of researchers remains, in principle, accessible.

More fundamentally, a world with working TMT devices would be a world in which the observer is restored to science. One of the deepest tensions in twentieth-century physics has been the apparent implication of quantum mechanics that the act of observation is not merely a method of learning about a pre-existing reality but a participant in constituting that reality. The role of consciousness in quantum measurement — the question of what it means to observe, and what it is about observation that collapses the wave function — remains unresolved despite decades of theoretical work. A world in which consciousness is understood as an independent variable, capable of existing and acting outside the biological brain, would approach these questions from an entirely different angle. The observer problem in quantum mechanics is not dissolved by TMT, but it becomes a different kind of problem — one whose solution space is larger, and perhaps more tractable.

The Humanitarian Horizon

The most ambitious aspects of the TMT vision concern its further engineering classes: ITM and IFE — trans-materialization and free energy. These are also the domains in which the implications become most difficult to hold without either overclaiming or underselling, and they require the most careful handling.

Trans-materialization — the instrumental movement of matter through non-ordinary channels — would, if it worked, abolish distance as a constraint on the physical distribution of goods. In the extreme case, the scarcity that drives so much of human conflict and suffering — scarce food, scarce medicine, scarce water, scarce energy — would become problems of production and not of distribution. The logistics that consume enormous resources and produce enormous inequities in the current global economy would be transformed.

The TMT vision envisions a world in which hunger is addressed not only through agricultural development and supply chain management but through the instantaneous transport of material — food, medicine, clean water — to wherever it is needed, regardless of the physical distance involved. This is an ambitious horizon that becomes more reachable as the foundational research advances. The path from here to there is actively being mapped by researchers across multiple disciplines, and the physics that would explain the mechanism is developing rapidly, drawing from quantum biology, consciousness science, and parapsysics.

But the distance from Maxwell's equations to a smartphone seemed similarly unbridgeable in 1865, and that distance was covered in a hundred and fifty years by the ordinary operations of scientific curiosity, engineering effort, and the willingness to follow evidence into territory that had no prior maps.

But the movement of objects is not where ITM's deepest implications lie. The same mechanism that could transport food and medicine across distance is, in principle, the mechanism that could transport a person — and a person who can cross the boundary between physical and non-physical existence and return is a person for whom death, in its current one-directional sense, no longer applies. This is the most consequential single implication anywhere in the TMT vision: not communication with the dead, not the visualization of subtle energy, not the end of material scarcity, but the possibility that physical immortality becomes accessible through a technology that lets consciousness move freely in both directions across a boundary currently crossed only once. Chapter Ten takes up this implication in full, including the theoretical grounding for why a working portal of this kind is considered possible at all and what the milestones toward it would actually look like. It is mentioned here, briefly, because no honest account of the shape of the TMT vision can pass over it quickly. It is the horizon toward which everything else in this chapter is, in some sense, pointed.

The free energy domain — IFE — is perhaps the most carefully hedged in the TMT vision. The claim is not that the laws of thermodynamics can be violated, but that there may be energy reservoirs accessible to consciousness-mediated technology that are not accessible to purely mechanical systems. William Tiller's experiments with intention-imprinted electronic devices, discussed in the previous chapter, represent the most developed existing evidence for something in this direction: devices that have been charged with coherent human intention produce measurable physical effects far larger than the electromagnetic energy of the devices themselves can account for. Where the additional energy comes from is not well understood. The hypothesis is that it comes from the coupling between physical and non-physical domains — that the informational substrate of reality has energetic properties that can be accessed under the right conditions. This is speculative. But it is grounded speculation: there are empirical results that require explanation, and this is one of the explanations on offer.

The Personal Scale

Amid the civilizational-scale transformations described above, it is worth staying with the personal, because the personal is where the vision is most vivid and most immediate.

A person navigating a serious illness who has access to IEV instruments can see, in real time and with objectivity, what is happening at the energetic level of

their body — not as an interpretation offered by a practitioner whose perceptual claims they must take on faith, but as a reading from an instrument with known properties and limitations. A healer working with that person can likewise see the effects of their interventions as they occur, adjusting in response to what the instruments show rather than to what their own sensitivity suggests. The subjectivity that makes energy medicine so difficult to evaluate and so easy to abuse — on both sides, by practitioners who overclaim and by patients who are vulnerable to suggestion — is not eliminated, but it is substantially constrained by the availability of an objective record.

A person interested in their own spiritual development who has access to ITC instruments can make contact, under conditions they can verify, with non-physical intelligences who may have perspectives and guidance unavailable to embodied sources. They are not required to mediate this contact through a third party whose reliability they cannot assess. The biases, projections, and limitations of a human intermediary — the subjective filtering problem that makes mediumship evidence so difficult to evaluate — are minimized. The contact is still imperfect; the instrument is still imperfect; the channel is still noisy. But the noise is now measurable, the instrument is now characterizable, and the result is something that can be assessed with the same tools that are brought to any other form of evidence.

The TMT vision also imagines access to one's own past lives — not through the uncertain recall of hypnotic regression or spontaneous childhood memory, but through instrumental access to the informational record of previous incarnations. This is among the more ambitious elements of the vision, resting on the further hypothesis that if consciousness survives death and eventually reincarnates, the informational record of previous lives is preserved in the non-physical substrate and, in principle, accessible through a sufficiently developed instrument. The evidence for reincarnation reviewed in the previous chapter — Stevenson's cases, Tucker's continuing work — suggests that such records do sometimes leak through into the present life, particularly in childhood. Whether they are systematically accessible through technology is a question that the TMT research program is specifically designed to begin answering, and the theoretical foundations for doing so are already being laid.

The Shadows in the Vision

A vision that acknowledges only its best-case implications is not a vision but a sales pitch. The TMT vision itself includes an explicit account of the risks, and they deserve as much attention as the opportunities.

The most immediate risk is psychological. Reliable access to non-physical dimensions of reality would confront individuals and cultures with information they might not be equipped to receive. The TMT vision describes the possibility

of a person discovering that an ancestor placed a curse on their lineage, or a scientist learning that there is no coherent Theory of Everything and that reality at its deepest level is irreducibly chaotic. These are not frivolous concerns. The architecture of human psychological stability depends in part on the structure of what one does not know. There are things that grief counselors, therapists, and spiritual directors tell clients very carefully and very slowly, because the truth, delivered without preparation, can damage rather than heal. A technology that makes the previously invisible suddenly visible would need to be embedded in a framework of psychological and ethical guidance that does not currently exist. Building that framework is as much a part of the TMT research program as building the instruments.

The second risk is political and structural. Technologies that increase human capacity tend, historically, to increase the capacity of whoever controls them disproportionately. The steam engine, the radio, the internet — each of these expanded what human beings could do, and each was also deployed in the service of existing power asymmetries. A technology that allows some people to communicate with non-physical dimensions while others do not, or that allows some entities to be contacted while others cannot, or that is controlled by governments or corporations rather than distributed equitably — such a technology would reproduce the inequities of the present world at a new level of intensity. The TMT vision explicitly identifies equity of access as a central design goal: the technology must be miniaturizable, must be affordable, must be distributable in the way that the smartphone became distributable. This is not merely an aspiration; it is a design constraint. A technology of this kind that is not equitable in access is a technology that has failed one of its primary purposes.

The third risk is what the vision calls unintended consequences — the discovery, through access to other dimensions, of things that would have been better left undiscovered, or the unleashing through new energetic channels of forces that the present framework of ethical and practical wisdom is not equipped to manage. The vision does not know what these consequences are — by definition, the unintended cannot be anticipated in detail. It only notes that they exist, that they should be expected, and that the development of a research program of this scope and ambition should be accompanied from the beginning by the kind of serious ethical reflection that has been conspicuously absent from many other technology development programs. The history of technology is not short of examples in which the failure to think through consequences in advance produced outcomes that took generations to partially remediate.

Vision as Motivation, Not Prophecy

This chapter has described a horizon — a direction in which the TMT research program is pointed, the shape of the destination toward which its near-

term steps are aimed. Not all of what has been described here will arrive on the same timeline, and some may take forms different from these descriptions as the research develops. Technology has a consistent history of surprising its predictors, usually by arriving in stranger and more powerful shapes than anyone imagined. With genuine support and focused research effort, many of these milestones are achievable within a generation.

What the vision does guarantee is the seriousness of the stakes. If the phenomena are real — if consciousness survives death, if non-physical domains of reality exist and are accessible, if the principles underlying EVP and ITC extend to energy visualization, healing, and the movement of matter — then the engineering project to which this book is addressed is not a curiosity or a hobby. It is among the most consequential scientific and technical undertakings that humanity could pursue. More consequential, by some measures, than almost any other project currently consuming the attention and resources of the world's scientific institutions.

That assessment may seem extravagant. It is worth sitting with it for a moment, rather than dismissing it reflexively. Consider what it would mean to confirm, empirically and reproducibly, that human consciousness survives death. Consider what it would mean to develop instruments that render the structure of non-physical reality as navigable as the structure of physical reality has become. Consider what it would mean to solve, not merely alleviate, the scarcity problems that drive most of the suffering and conflict in human civilization. The early steps are achievable now. The direction is set, and the case for moving in that direction has been laid out across the preceding chapters. The voices in Jürgenson's recordings are still asking to be heard.

Notes

1. The five TMT engineering classes and their definitions are developed in Steve Glanz's foundational Vision essays at transmaterialization.com, particularly Parts 1 through 4. The classification system — ITC, IEV, ITM, IFE, IPH — is introduced in Vision Part 1 and elaborated across subsequent parts with examples and implications in each domain. The vision essays are explicitly labeled as thought experiments and extrapolations; the author's own framing distinguishes between what the evidence supports and what the vision imagines. This chapter follows that framing scrupulously. 
2. The religious and cultural implications of a world in which post-mortem existence became instrumentally accessible are developed across Vision Parts 2 and 3 at transmaterialization.com. The specific thought experiments — the fundamentalist Christian, the Hindu believer, the materialist scientist encountering evidence of the afterlife — are drawn from Vision Part 3, where they are presented explicitly as 'scenarios illustrating aforementioned impacts' and as 'thought experiments that are not the author's view.' The framing is consistently that of possibility and implication, not prophecy: 'We don't know what the TMT world will reveal. We only know that making the invisible visible will have a profound effect on what people believe and how they act.' 3. The possibility of instrumental access to past-life records is the most speculative element of the personal domain in the TMT

Chapter 5 - The Shape of the Vision

vision, extending beyond the direct implications of ITC and IEV into territory that depends on the further hypothesis that informational records of previous incarnations are preserved in the non-physical substrate and can be accessed through instrumentation. This hypothesis is consistent with the evidence reviewed in Chapter 3 — particularly Stevenson's and Tucker's past-life memory research — but moves well beyond what that evidence establishes. It is presented here as an ambitious possibility within a chapter that frames its content as visionary direction-setting — the kind of target that gives a research program its motivating purpose.



CHAPTER SIX

Why Technology?

The Fairness Argument, the Complement Argument, and the Defense of Instrumental Spiritual Practice

At some point in almost every conversation about Transmaterialization Technology — once the evidence has been laid out, once the engineering project has been described, once the vision has been sketched — a particular objection surfaces. It is not a skeptical objection, from the side that doubts survival of consciousness entirely. It is an objection from the other side: from people who believe that non-physical reality is real and accessible, and who feel that instrumentalizing access to it is somehow wrong. The objection takes various forms, but its core is always some version of the same proposition: these experiences are meant to be earned, not purchased. Spiritual development is an inside job. Technology is the wrong tool for an inner journey, and building devices to shortcut the path will produce something shallow, dependent, and ultimately impoverished by comparison with the genuine article.

This objection comes from a tradition with deep and honorable roots. Rudolf Steiner argued that true human evolution unfolds through moral and spiritual refinement, not material invention. Various contemporary thinkers in the spiritual and ecological traditions maintain that the push toward technological augmentation of human consciousness is a form of hubris — that it risks severing our connection to natural law, to the rhythms of the earth, to the developmental processes that have shaped human consciousness over millennia. Technology, in this reading, is not neutral. It is the product of a materialist civilization that has systematically misunderstood reality, and to use its tools in the service of spiritual access is to contaminate the goal with the means.

This chapter takes the objection seriously. It does not dismiss it. Several of its elements point to genuine risks — risks that Chapter Five of this book addressed directly, and that the TMT framework explicitly acknowledges. The concern about dependency is real. The concern about access concentration is real. The concern about shallow instrumentalism — treating profound experiences as consumer products — is real. But the objection as a whole rests on a premise that does not survive careful examination: the premise that technology and contemplative practice are in essential conflict, that developing one necessarily diminishes the other. This chapter argues that the conflict is false, that technology and inner development have been complementary throughout the history of human spiritual practice, and that the particular form of technology this book is concerned with — instruments designed to extend access to non- physical reality

— is not the enemy of genuine spiritual development but one of its most promising potential allies.

The Inaccessibility Problem

Begin with a fact that the romantic vision of purely natural spiritual development tends to elide: non-physical experience, as currently available, is not equally accessible to all human beings. It never has been.

Every tradition that has taught methods of accessing non-physical dimensions of reality — meditation, contemplative prayer, shamanic practice, yogic development, psychic cultivation, physical mediumship — has also documented that these methods are difficult, that they require years or decades of sustained discipline to develop, that the quality of results varies enormously among practitioners, and that a significant proportion of students never achieve the capacities that the most gifted members of their lineages demonstrate. The mystic who can enter deep meditative states at will, the yogi who reliably perceives the subtle anatomy of other people's energy fields, the medium whose contacts with deceased individuals are consistently specific and verifiable — these are exceptional human beings. Their capacities are real. But they are not evenly distributed, and the disciplines required to develop them are not universally accessible.

Consider what this means in practice. The griever who has lost a child and wants genuine, evidential contact with that child's continued existence has, at present, a set of options: they can consult a medium whose reliability they cannot independently assess; they can undertake a years-long program of meditative or psychic development that may or may not, after significant investment of time and effort, produce the contact they seek; or they can accept the materialist conclusion that the child is simply and entirely gone. None of these options is satisfactory. The medium introduces a subjective filter whose distortions cannot be controlled. The developmental path is open only to those with the temperament, the time, and the economic freedom to pursue it seriously. The materialist conclusion is, if the evidence reviewed in earlier chapters is taken seriously, probably wrong.

The problem of unequal access to non-physical experience is not incidental to the spiritual traditions that have developed methods for achieving it. It is structural. Every tradition has developed its own version of the distinction between the initiated and the uninitiated, the gifted and the ordinary, those who can see and those who cannot. This is not necessarily a failure of intention; it may reflect genuine differences in natural human endowment, just as some people are born with better eyesight, better musical pitch, or better mathematical intuition than others. But the consequence is an enormous and persistent inequality in access to one of the most significant categories of human

experience: knowledge of what we are, where we come from, and what, if anything, awaits us after death. The TMT framework names this inequality directly. Only a small percentage of the world's population possesses the non-instrumental skills to access other dimensions reliably, and the problem of subjective filtering can obscure fidelity even in those who do. The development of technology to address this inequality is not a spiritual shortcut. It is a form of justice.¹

One partial exception to this picture deserves acknowledgment: the renewed scientific interest in psychedelic compounds — psilocybin, DMT, ayahuasca — as facilitators of non-ordinary states of consciousness. Recent research, including studies at Johns Hopkins and Imperial College London, has documented that these substances can reliably occasion experiences that subjects describe as deeply meaningful, often involving apparent contact with non-physical presences or dimensions. They have also shown therapeutic efficacy for depression, addiction, and end-of-life anxiety. But psychedelics are not a solution to the inaccessibility problem as this book frames it. They require trained facilitation, carry significant psychological risks for vulnerable individuals, involve profound legal constraints in most jurisdictions, and produce experiences that are intense and difficult to control or verify — valuable for personal transformation, but poorly suited to the kind of reliable, repeatable, verifiable contact that TMT aims to enable. They are better understood as additional evidence that non-physical dimensions are accessible in principle, not as an engineering solution to the problem of access.

The Smartphone Analogy and the Democratic Imperative

The argument from access becomes concrete when you consider the trajectory of technology that has the most relevant precedent: the smartphone.

Twenty years ago, access to the accumulated knowledge of human civilization — to its libraries, its scientific literature, its music, its news, its methods of communication across any distance — was deeply unequal. It was concentrated in institutions, in cities, in wealthy countries, in the hands of people with access to universities and research libraries and the economic resources to use them. The emergence of the smartphone changed this, imperfectly and incompletely but substantially. A subsistence farmer in rural sub-Saharan Africa who owns a smartphone — and in many parts of that region, most people do — has access to resources that a professor at Oxford in 1990 could not have imagined. Medical information. Agricultural guidance. Financial services. Communication with family members across continents. The democratization of access to knowledge has been one of the most significant social developments of the early twenty-first century, and it was produced entirely by technology.

The TMT vision explicitly invokes this precedent. If the technology can be miniaturized and embedded in something as simple as a smartphone — through a combination of hardware and software — then even in the most materially poor parts of the world, access to reliable contact with non-physical reality could become as universal as access to the internet has become. The meditation teacher in a monastery on a Himalayan hillside will always have capacities that a device cannot replicate; there is a reason that people still travel to study with masters rather than watching videos of them online. But the video of the master has made the master's teaching available to people who would never have had the chance to sit in the same room, and this is not a trivial thing. The democratization of access is always an approximation and always involves loss as well as gain. It is nevertheless worth pursuing.

The equity argument is not merely utilitarian. It is also, in a deep sense, spiritual. The traditions that have most carefully developed methods of non-physical access have also, almost without exception, taught that the benefits of such access are not meant to be private property. The Bodhisattva ideal in Buddhism is precisely the commitment to postpone one's own liberation until all beings can be liberated together. The Christian mystic's injunction to be a channel rather than a reservoir — to let what flows in flow out — reflects the same intuition. The vision of a world in which access to non-physical reality is confined to those with the economic leisure or the natural gift to develop it without technological assistance is not a spiritually elevated vision. It is a vision of continued privilege dressing itself in the language of authenticity.²

The False Dichotomy

The deeper philosophical problem with the naturalist objection is that it rests on a distinction — between natural and technological access to non-physical reality — that becomes very difficult to defend when you examine it closely. Human beings do not have unmediated access to reality of any kind, physical or non-physical. Every form of human experience is mediated by the structures through which it passes — by the nervous system, by the sense organs, by the cultural frameworks that shape perception, by the linguistic categories that organize what we attend to, by the emotional states that color what we notice. Meditation does not remove mediation. It changes the mediating structure, in ways that have been documented by contemplative traditions and, more recently, by neuroscience. But the meditator's experience of non-physical reality is not less filtered than the reading from an instrument; it is differently filtered, through the particular architecture of a particular nervous system that has been trained in a particular way.

The claim that non-instrumental access is more authentic than instrumental access assumes that the natural instrument — the human nervous system — is

somehow a more transparent window on non-physical reality than a well-designed technological instrument. This assumption may or may not be true, and it is an empirical question rather than a logical one. There are reasons to think that trained human attention has properties that no electronic device can fully replicate — sensitivity to subtle relational contexts, the capacity for emotional resonance, the holistic integration of multiple types of information simultaneously. There are also reasons to think that human attention has systematic biases — wishful thinking, confirmation bias, the pressure to find what one is looking for — that a well-designed instrument might correct. The honest assessment is that the two modes of access are different tools with different strengths and weaknesses, not that one is authentic and the other is counterfeit.

The naturalist objection often implicitly assumes that ancient or traditional technologies of spiritual access are not technologies at all — that the crystal, the sacred geometry, the alchemical vessel, the ceremonial drum, the incense and candle that structure a ritual space are just adjuncts to a purely interior process rather than instrumental mediations of a non-physical reality. But this assumption does not survive examination. Every contemplative tradition has developed a material technology of spiritual practice: architecture designed to focus consciousness in particular ways, visual and auditory stimuli calibrated to induce specific states, substances and garments and implements whose physical properties interact with the practitioner's perceptual system. Hildegard of Bingen composed music specifically designed to shift the listener's state of consciousness. The labyrinth at Chartres Cathedral is a precision instrument for the induction of meditative movement. The prayer wheels of Tibetan Buddhism, the mandala, the rosary, the kiva, the medicine wheel — these are instruments, designed by careful observation of what works, deployed in the service of non-physical access. The distinction between these ancient instruments and a modern ITC device is a distinction of degree, sophistication, and precision, not a distinction of kind.³

Technology as a Natural Extension of Human Evolution

There is a broader philosophical claim embedded in the naturalist objection: that human technology is in some sense external to the natural order, an imposition of the artificial on the organic. This claim has been challenged, in the contemporary philosophy of mind and cognitive science, by a body of work arguing that the boundary between the human organism and its tools is much less sharp than common sense suggests. The human brain is what it is partly because of the tools it has used for hundreds of thousands of years; stone tools shaped the hands that shaped the brain that developed language; language shaped the kind of thinking that developed writing; writing shaped the kind of memory and attention

that developed science. Technology is not an alien addition to human nature. It is constitutive of it.

The TMT framework makes this point directly: technology, when ethically designed and metaphysically informed, is not anti-natural — it is a natural extension of the human creative impulse and, by extension, of cosmic evolution itself. The human capacity for tool-making is not an anomaly within nature but an expression of the same self-organizing, complexity-generating tendency that produces crystal lattices, nervous systems, and ecological webs. The question is not whether to use tools but which tools to use and for what purposes. An instrument designed to extend access to non-physical reality, built on a theoretical framework that takes consciousness seriously and treats it as a fundamental variable in the design, is not the dehumanizing takeover by machines that the naturalist critics fear. It is, in the language of the TMT framework, the humanization of the technological movement — the introduction of spiritual, metaphysical, and paranormal dimensions into a technological culture that has, until now, systematically excluded them.

The distinction between technology designed to extract and control — to treat nature, including human nature, as a resource to be exploited — and technology designed to reveal and expand — to extend the range of what human beings can perceive, know, and become — is a real and important distinction. Much of the technology that has shaped the modern world belongs to the first category, and the naturalist critics are right to be suspicious of it. But the category does not define technology as such. A telescope is technology. So is a microscope. So is a hearing aid. So is the pharmaceutical compound that allows a person with depression to function. The fact that technology can be and frequently is used to diminish human experience does not establish that technology is inherently diminishing. It establishes that the purposes and values embedded in technological design are important — which is an argument for developing TMT consciously, ethically, and with a full account of what it is for, not an argument against developing it at all.

The Biofeedback Analogy

Perhaps the most useful way to understand the relationship between TMT and contemplative practice is through the analogy of biofeedback training.

Biofeedback is a form of learning in which a person is given real-time information about the state of their own physiological processes — heart rate, blood pressure, skin conductance, brainwave patterns — that they would not ordinarily be able to perceive consciously. The information is typically displayed on a screen or converted to an auditory signal. The goal is to develop voluntary control over processes that normally proceed outside conscious awareness. Biofeedback training has been shown to be effective for a range of conditions

including chronic pain, anxiety disorders, hypertension, and attention difficulties. Meditators who have undergone biofeedback training often describe it as dramatically accelerating the development of capacities they had been working to develop through meditation alone.

The most important thing about biofeedback training, for the present discussion, is what happens after the training is complete. The person does not become permanently dependent on the biofeedback device. They internalize the skill that the device helped them develop. People who learn physiological self-regulation through biofeedback devices typically retain that capacity after the devices are taken away. The device was a scaffold, not a crutch. It made visible what was previously invisible, allowing the practitioner to develop deliberate control over a process that was previously opaque to them. Once the control was internalized, the device became unnecessary. The TMT framework uses exactly this analogy. People learning biofeedback to accelerate mental control of their bodies retain their skills after weaning themselves off the biofeedback devices. Similarly, TMT instruments might function as scaffolds for the development of perceptual and communicative capacities that, once sufficiently developed, can be exercised without technological assistance. This would make the devices not a permanent dependency but a training environment — a way of making visible what is currently invisible so that human beings can learn to navigate it.⁴ This analogy suggests a relationship between instrumental and non-instrumental access to non-physical reality that is developmental rather than competitive. In the early stages of TMT development, reliable contact with non-physical domains would be available primarily through instruments, because the instruments can do what most human nervous systems, without special training, cannot. Over time, as people use the instruments to develop their own perceptual capacities — learning, with instrumental feedback, what it feels like to be in contact with a non-physical intelligence, what the distinctive qualities of that contact are, how to distinguish it from imagination and projection — those capacities might become learnable in the same way that other forms of perceptual acuity are learnable. The instrument introduces people to a mode of experience; repeated exposure develops the capacity; the capacity, once developed, can eventually be exercised without the instrument. This is the technological complement to contemplative practice, not its replacement.

The Synergy Thesis

The complementarity argument can be extended further than the biofeedback analogy alone suggests. There is reason to think that the relationship between contemplative practice and TMT devices would not merely be sequential — first the device teaches, then the practitioner practices without it —

but genuinely synergistic: that each mode of access would develop faster and more richly in the presence of the other than either would develop in isolation.

The evidence from ITC research itself supports this. One of the most consistent findings across ITC research is that the quality of results depends significantly on the state of the human operator. Anabela Cardoso's decades of direct radio voice research have documented that sessions conducted when she is in a calm, receptive, energetically coherent state produce better results than sessions conducted when she is distracted or emotionally unsettled. Alexander MacRae observed that his own attitude and manner of questioning affected the responses he received from the entities he was contacting. The Luxembourg researchers described the importance of the Harsch-Fischbachs' meditative orientation to the quality of what they received. The TMT practitioner Keith Clark has stated plainly that human energy is as important a part of the communication system as the technology.

This operator effect, discussed as a methodological problem in Chapter Four, is also a pointer toward a genuine interdependence. The instruments are not replacing the human capacity for spiritual access; they are in dialogue with it. A practitioner who has developed genuine meditative depth and psychic sensitivity may produce results through ITC instruments that a practitioner without that development cannot produce. The instrument extends what the human being can do; the human being's development determines what the instrument is extended into. The most effective ITC researcher would likely be neither the pure technologist who knows nothing of contemplative practice nor the pure contemplative who scorns instrumentation, but the person who has developed both — who brings a trained interior and an educated exterior to the encounter with non-physical reality.

Tom Butler's theoretical model, developed across decades of ATransC research and presented most fully in his *Implicit Cosmology*, offers one of the more developed accounts of why this interdependence should be expected rather than merely observed. Butler proposes that EVP formation depends on what he calls a morphic field — a subtle, etheric organizing structure shaped by the practitioner's intention, which does not itself produce the physical sound but biases the physical process toward producing it, through a mechanism he terms stochastic amplification: a weak psi influence amplified by the same kind of nonlinear noise process that, in ordinary electronics, allows a faint signal to be strengthened by a carefully tuned background of noise. On this model, the practitioner's intention is not incidental to the instrument's performance; it is the field within which the instrument's physical process becomes capable of producing a meaningful result at all. This is a stronger and more specific claim than the general observation that operator state matters. It proposes an actual coupling mechanism, and it is worth noting that Butler advances it as an

argument for the survival hypothesis specifically, not as a retreat into purely psychological or anomalistic explanation: the morphic field model assumes a genuine etheric communicator on the other side of the coupling, with the practitioner serving as the physical conduit rather than the sole source of what comes through.⁶ This is, in fact, how transformative capacities have always developed in human history. The great scientists were not merely technical manipulators of instruments; they were people whose imaginations had been shaped by sustained engagement with philosophical and sometimes explicitly spiritual questions. Newton spent more time on theology than on physics. Faraday's religious convictions shaped his model of the electromagnetic field. Schrödinger's engagement with Vedanta philosophy influenced his thinking about quantum mechanics and consciousness. The idea that technological and inner development are opposed is contradicted by the lives of the people who have done the most to develop both.

This interdependence between operator state and instrumental output raises a genuine methodological challenge that the TMT framework does not yet fully resolve: if the quality of contact depends partly on the practitioner's psychology, then the phenomena are difficult to falsify in the conventional sense. A null result might reflect a poorly calibrated instrument, an insufficiently trained operator, or a genuine absence of the phenomenon being sought — and it is not always possible to distinguish between them. This is not unique to ITC research; similar problems arise in meditation research and therapeutic contexts where individual differences in response are large. But it is a limitation that any serious research program must acknowledge explicitly and work to address through experimental design — for example, through operator training protocols with measurable benchmarks, matched comparisons across operators of different experience levels, and pre-registration of specific, testable predictions before experiments are run.

Against the Romantic Fallacy

The naturalist objection to TMT sometimes draws on a broader romantic critique of modernity: the view that the pre-technological past was characterized by a more organic, more spiritually integrated relationship with the cosmos, and that the development of modern technology has progressively severed human beings from this primordial wholeness. This view has genuine purchase. There is something real being pointed at when people describe the alienation of modern technological life, the attenuation of perceptual sensitivity that comes from spending most of one's time in environments that have been comprehensively insulated from the natural world, the narrowing of attention that comes from constant digital stimulation.

But the romantic critique, in its stronger forms, makes a historical error. The pre-modern world was not uniformly characterized by spiritual richness and contemplative depth. It was also characterized by widespread suffering, by the ruthless concentration of power, by the systematic exclusion of most people from the spiritual and intellectual resources that were available to a small elite. The monastery that preserved the contemplative tradition also enforced the boundaries that kept most people out of it. The shaman who could access non-physical reality was a specialist whose services had to be sought, paid for, and accepted on terms defined by the shaman's own cosmological framework. The Brahmin who had mastered the Vedic arts of consciousness was not typically interested in sharing that mastery with the Dalit farmer in the next village.

The selective memory that idealizes traditional spiritual access while forgetting its exclusions is itself a form of spiritual privilege — the privilege of people who, by accident of birth, temperament, or circumstance, belong to the category that traditional systems served well. The TMT framework's insistence that fairness and equity are worthy objectives is not a concession to secular values at the expense of spiritual ones. It is an expression of the most fundamental spiritual commitment: that every human being is a full participant in the cosmos, that the experiences and knowledge that illuminate the nature of existence belong to no class, no culture, no tradition exclusively, and that any system that concentrates access to those experiences is a system that has partially failed its own deepest calling.⁵

The Humanization of the Technological Movement

There is a final dimension to the case for TMT that deserves its own statement: the case that this technology is not only good for human beings in a spiritual and social sense but good for technology itself.

The technological civilization of the past three centuries has been built almost entirely on a conception of reality that excludes consciousness as a fundamental variable. Physics has treated consciousness as an epiphenomenon — a byproduct of matter, causally inert, not part of the real machinery of the world. Engineering has proceeded accordingly: devices are designed to interact with matter and energy in the ways that physics describes, and the effects of consciousness on device behavior are treated either as noise to be eliminated or as operator error. The result is a technological world of extraordinary material power and extraordinary spiritual impoverishment — a world in which human beings have unprecedented capacity to act on matter and unprecedented difficulty making sense of what they are, why they are here, and what, if anything, they owe each other and the cosmos.

Introducing consciousness as a design variable — building devices that are intended to interact with consciousness, that are sensitive to the intentions of

their operators, that are designed to interface with non-physical as well as physical reality — would change the character of the technological project in ways that go far beyond the specific applications of TMT. A physics that has had to seriously account for the role of consciousness in producing observable results — the way that William Tiller's intention-imprinted devices produce results that conventional physics cannot explain — is a physics that is moving toward a more complete description of reality. A technology built on that physics would be a technology that is, in the literal sense of the word, more humane: more shaped by and responsive to the full range of what human beings are and need.

The TMT framework describes this as the humanization of the transhumanist movement. The current push toward technological augmentation of human intelligence and capacity — artificial intelligence, neural interfaces, genetic engineering — proceeds almost entirely within the materialist framework that has defined technology for three centuries. It imagines improved versions of the biological human but rarely questions the fundamental assumption that the human being is a biological organism and nothing more. The addition of the spiritual, metaphysical, and paranormal dimensions of human experience to the design brief of technology would produce something genuinely different: not merely faster or more powerful versions of existing human capacities, but new capacities rooted in a more complete understanding of what we are. That is not the enemy of spiritual development. It is one of spiritual development's most legitimate ambitions.

The enemy of human evolution is never the tool. It has always been the intention behind it. Used wisely, and with full awareness of what we are and what we are reaching toward, technology does not close the door to spirit. It can be the door.

Notes

1. The three-part response to the question 'why bother with technology rather than teaching people to access other dimensions without instruments?' is developed in Steve Glanz's 'Transmaterialization Technology: Vision — Part 1' at transmaterialization.com. The three answers given there are: (1) only a small percentage of the population has natural non-instrumental skills, and subjective filtering can obscure fidelity; (2) the technology can be miniaturized to smartphone scale, making it universally accessible; and (3) humans, standalone machines, and human-machine interfaces can coexist and may have a synergistic effect. The explicit equity framing — that fairness and equity make TMT development 'a leveling of the playing field' — appears in the same document. 
2. The Bodhisattva ideal as a framework for understanding the social ethics of spiritual access is a standard concept in Mahayana Buddhism, developed most fully in texts such as Shantideva's *Bodhicaryavatara* (8th century CE). The Christian mystical tradition's emphasis on being a channel rather than a reservoir appears across multiple sources including Meister Eckhart, Thomas à Kempis, and the Carmelite tradition. The point being made here — that the concentration of spiritual access in a privileged class contradicts the deepest teachings of the

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traditions that developed such access — is the author's synthesis, not a quotation from any specific source. 

3. The material technologies of traditional spiritual practice — architecture, music, liturgical objects, ritual substances — are discussed from a variety of perspectives in scholarly literature on material religion. See, for example, David Morgan, *The Sacred Gaze: Religious Visual Culture in Theory and Practice* (University of California Press, 2005) and Colleen McDannell, *Material Christianity* (Yale University Press, 1995) for the Christian tradition; and David Shulman and Guy Stroumsa, eds., *Dream Cultures: Explorations in the Comparative History of Dreaming* (Oxford University Press, 1999) for broader comparative material. The naturalism objection's implicit exclusion of traditional ritual objects from the category of 'technology' is addressed in the TMT essay collection by the observation that practitioners of Wicca, shamanism, ceremonial magic, and similar fields 'utilize instruments such as magic mirrors, magic wands, crystals, herbs, and radionic devices' — framed as precursors to rather than alternatives to modern electro-mechanical instruments. 
4. The biofeedback analogy and the observation that 'people learning biofeedback to accelerate mental control of their bodies retain their skills after weaning themselves off the biofeedback devices' appears in 'Transmaterialization Technology: Vision — Part 1' at transmaterialization.com, in the context of the three-part response to the 'why technology' question. The empirical literature on biofeedback training and skill retention is extensive; a representative overview is Frank Andrasik, 'Biofeedback in Headache: An Overview of Approaches and Evidence,' *Cleveland Clinic Journal of Medicine* 77 Suppl 3 (2010), S72–76. 
5. The argument developed here — that the romantic idealization of pre-technological spiritual access tends to reflect the perspective of those whom traditional systems served well — is an extension of the TMT framework's equity argument rather than a direct quotation. The 'Naturalism vs. Technological Evolution: A Defense of Trans-Materialization Technology' document at transmaterialization.com addresses the naturalist objectors (Passio, Tellingier, Eisenstein, Bonacci, Steiner, Wilcock) and argues that their perspective 'rests on a false dichotomy: that nature and technology are oppositional.' The present chapter extends that argument by examining the historical record of who traditional systems of spiritual access have and have not served. 
6. Tom Butler's morphic field and stochastic amplification model for EVP formation is developed in his ATransC research writings, including the article underlying the discussion of the Transform EVP Hypothesis and the morphic field concept, and is presented in fuller theoretical form in his book-length work *The Implicit Cosmology*. The term 'stochastic resonance' for the underlying physical amplification principle — a weak signal strengthened by a nonlinear system in the presence of background noise — is borrowed from established physics and applied by Butler to the psi-influence case. Butler's explicit framing of the model as support for the survival (rather than purely anomalistic-psychology) hypothesis, with the practitioner functioning as physical conduit rather than sole source, is stated directly in his published writing on the Trans-Survival Hypothesis. 

CHAPTER SEVEN

The Question of Proof

Why Argument Has Failed and Why a Device Might Succeed

The case for the survival of human consciousness after death has been made, in one form or another, for as long as human beings have made cases about anything. It has been made by philosophers from Plato onward, by theologians in every tradition, by mystics who claimed direct experience of what lies beyond the body, by grieving parents who could not accept annihilation, and by scientists who found in the evidence something their professional frameworks had not prepared them to explain. The case has been made well, with increasing methodological sophistication, for more than a century of organized psychical and parapsychological research. And it has not, by any reasonable measure, succeeded.

Not succeeded at convincing the scientific mainstream. Not succeeded at moving the cultural consensus. Not succeeded at shifting the funding priorities of research institutions, the editorial policies of major journals, the curricula of universities, or the working assumptions of the biologists and neuroscientists and philosophers of mind who continue, as a professional matter, to treat the productive hypothesis — consciousness as a product of the brain, ceasing entirely at death — as if it were an established fact rather than a working assumption that the evidence increasingly challenges.

This chapter asks why. Why has a century of serious, rigorous, carefully argued research not yet moved an institution that is, at least in principle, committed to following evidence wherever it leads? And it draws on that diagnosis to argue for the pragmatic insight at the center of the TMT framework: that a working device might accomplish what argument has not, and that this is the strongest strategic reason for pursuing the engineering project whose foundations have been laid in the preceding chapters.

The Sociology of Ignored Evidence

The failure of survival research to penetrate mainstream science is not, on careful examination, a failure of the evidence. The evidence, as the previous chapters have established, is real and substantial. Near-death research conducted by cardiologists in prospective studies with proper controls has produced findings that are difficult to accommodate within the productive model of consciousness. Past-life memory research conducted by psychiatrists at major universities over four decades has produced case files that no conventional explanation satisfactorily accounts for. Controlled mediumship research using triple-blind protocols has produced results that exceed chance at statistically significant

levels under conditions that preclude the standard alternative explanations. This evidence has been published in peer-reviewed journals, presented at scientific conferences, and reviewed by qualified researchers who have found it methodologically credible. And the mainstream scientific community has, for the most part, ignored it.

The philosopher and scholar of religion Jeffrey Kripal has analyzed this institutional blindness with unusual precision. The problem, he argues, is not epistemological but metaphysical: the mainstream scientific community operates under what he calls the central dogma of neuroscience — the assumption that the brain generates consciousness — as if it were not an assumption at all but an established truth. This assumption, which he describes as resting on 'unconscious, unexamined, or unacknowledged metaphysical commitments,' makes any evidence for the independence of consciousness from the brain literally impossible by definition. Well-attested exceptional experiences that challenge the premise are 'actively dismissed or ignored, since they are impossible by definition.' The result, as Kripal puts it with biting precision, is that 'such things that happen all the time cannot happen at all.' This is not a failure of intelligence or good faith among individual scientists. It is a structural feature of how scientific paradigms work, described with great care by Thomas Kuhn and confirmed by the sociology of science since his foundational work. Paradigms are not just theories. They are the background assumptions, methodological conventions, institutional structures, and social norms within which normal science is conducted. They define what counts as a legitimate research question, what kinds of evidence are admissible, what constitutes an adequate explanation, and what is professionally safe to say. Anomalies that contradict the dominant paradigm do not automatically trigger paradigm revision; they are typically absorbed, explained away, or ignored until the accumulation of anomalies reaches a critical mass that forces the field to reckon with them. The survival evidence has not yet reached that critical mass, in part because the institutional machinery of normal science — the funding agencies, the journals, the hiring committees, the textbooks — systematically filters it out before it can accumulate. That institutional resistance, however, is showing visible signs of strain. The Bigelow Institute prize, congressional attention to UAP, and the growing respectability of consciousness research in mainstream neuroscience all suggest that the window for breakthrough is opening, not closing.¹ The sociological barriers are specific and documented. Parapsychology and survival research receive almost no funding from major scientific institutions. The few organizations that have historically supported this research — the Parapsychology Foundation, the Society for Psychical Research, the Bigelow Institute for Consciousness Studies — are small, privately funded, and operate entirely outside the mainstream research infrastructure. Researchers who take survival phenomena seriously risk their careers; the professional consequences of

publishing seriously on EVP or mediumship in a mainstream psychology or neuroscience journal are well enough understood to deter most people who would otherwise be scientifically capable of contributing to the field. The peer-review system, which is the primary quality-control mechanism of mainstream science, involves evaluation by colleagues who share the paradigm's assumptions, so research that challenges those assumptions struggles to get a fair hearing even when its methods are rigorous.

Tom Butler, who spent decades as one of the most methodologically careful figures in ITC research, described the landscape with characteristic directness: mainstream scientists usually ignore ITC, while many parapsychologists treat ITC with something close to embarrassment, and the few granting organizations that exist are largely limited to the paranormalist community itself. The field is not underfunded because the evidence is weak. The evidence is poorly known because the field is underfunded. The causation runs both ways, producing a reinforcing cycle of marginalization.

The information ecosystem in which most people now form their first impression of this field compounds the problem rather than correcting it. A person curious about EVP or survival research is far more likely to encounter the topic through Quora, Wikipedia, Reddit, Medium, Substack, or a clip circulating on X, Bluesky, or Threads than through a peer-reviewed journal, and increasingly the first encounter is mediated by an AI system trained on a crawl of that same unfiltered material. None of these platforms is designed to apply the kind of sustained, qualified editorial judgment that would distinguish MacRae's shielded-room experiments from a ghost-box video produced for entertainment; they reward engagement, and sensational or dismissive framing both engage better than careful uncertainty. The effect is a public information environment that is simultaneously oversaturated with claims about the paranormal and almost entirely innocent of the methodological distinctions this book has tried to draw. Against that backdrop, the slow, unglamorous work of building genuinely rigorous structure — research protocols, shared standards, accountable collaboration — matters more than it would in a healthier information environment. Some of that work is already underway in places easy to overlook: independent research communities, including grassroots groups organizing serious investigation alongside the broader paranormal-interest public, have begun to impose exactly this kind of structure on their own activity, without waiting for institutional permission to do so. Whether such efforts can scale into something with the credibility of an academic discipline is an open question. That they exist at all, doing real methodological work outside any institution willing to fund or recognize it, is itself more evidence for the sociological diagnosis this chapter has been making.

The Limits of the Persuasion Strategy

The standard response to institutional resistance, within survival research as within any marginalized field, has been to make better arguments and gather better evidence. This strategy has a certain logic: if the mainstream is ignoring the evidence because it is not good enough, improve the evidence; if it is mischaracterizing the arguments, make the arguments more carefully; if it is rejecting the research on methodological grounds, tighten the methodology.

This strategy has produced genuine progress. The quality of survival research has improved substantially over the past century. The methods used in modern mediumship research — the triple-blind protocols developed at the Windbridge Research Center — are far more rigorous than the séance-room investigations of the Victorian era. Near-death research has moved from retrospective case collections to prospective hospital studies. Past-life memory investigation has developed systematic protocols for assessing the verifiability of specific claims. The field's self-critical awareness of the problems of pareidolia, confirmation bias, cold reading, and experimenter expectation is far more developed than it was two generations ago.

And yet the strategy has not achieved its goal. The mainstream has not moved to accommodate the better evidence. It has not engaged the improved arguments. It has not acknowledged the methodological advances. It continues, for the most part, to proceed as if the entire field did not exist. The persuasion strategy has improved the quality of the research without changing the social dynamics that determine what the research community pays attention to. This suggests that the problem is not primarily epistemological — not a matter of the evidence being insufficient — but sociological: a matter of the institutional and professional structures that determine what gets taken seriously, regardless of evidential weight.

The Roe, Cooper, Lorimer, and Elsaesser essay on the best evidence for survival, submitted to the Bigelow Institute for Consciousness Studies, makes this point with characteristic scholarly restraint. The authors note that the mainstream scientific community seems 'reluctant to consider [the evidence] in a serious and systematic fashion,' not because the evidence is unworthy of consideration but because 'beliefs and practices that contradict the central dogma of neuroscience are actively dismissed or ignored, since they are impossible by definition.' They invoke William James's useful observation: if you wish to demonstrate that not all crows are black, you need only find one white crow. The evidence for survival, they argue, already contains several strong candidates for the white crow. The problem is not that the white crow hasn't been found. The problem is that the field of observers has decided, as a matter of prior commitment, that white crows do not exist, and no individual specimen is

therefore going to change the verdict.² The Roe essay was one of two hundred and four submissions to that 2021 contest, judged over four months by a six-member panel that included the psychiatrist Brian Weiss and the statistician Jessica Utts. First prize, five hundred thousand dollars, went to the parapsychologist and longtime public broadcaster Jeffrey Mishlove, for an essay titled *Beyond the Brain: The Survival of Human Consciousness After Permanent Bodily Death*, which surveyed evidence across nine separate domains of inquiry — near-death experience, after-death communication, reincarnation, physical and mental mediumship, instrumental transcommunication, possession, xenoglossy, and peak-in-Darien experiences — and argued that the cumulative weight of independent lines of evidence, each individually persuasive, becomes close to overwhelming when considered together. Second prize went to Pim van Lommel, whose near-death research is discussed in Chapter Three of this book. The size of the prize pool — one point eight million dollars across twenty-nine winning essays — is itself a data point worth sitting with: a private citizen judged the case for survival of consciousness important enough to fund at a scale that no university, government agency, or scientific foundation has approached. That a major prize for rigorous survival scholarship had to come from outside the institutions of mainstream science, rather than from within them, illustrates the same sociological pattern this chapter has been describing rather than contradicting it.²

The Pragmatic Insight

It is against this background that the pragmatic argument for the TMT engineering project becomes most compelling. The argument is not that the current evidence is insufficient and must be supplemented — the evidence, carefully examined, is already sufficient to support serious inquiry. The argument is that the institutional structures through which scientific consensus is formed are, for reasons that are sociological rather than evidential, resistant to the kind of evidence that survival research has been producing. And the question is: what kind of evidence would not be resistible?

The answer, suggested with elegant directness in the foundational TMT vision documents, is: a working device. Not a study showing that mediums produce above-chance results under triple-blind conditions. Not a prospective hospital study of near-death experiences documenting veridical perception during cardiac arrest. Not a forty-year archive of past-life memory cases meeting systematic verification criteria. These forms of evidence are excellent, and they have moved the needle within the research community. But they are the kinds of evidence that can be processed through the standard institutional machinery — evaluated by peer reviewers, contested by alternative explanations, absorbed or

dismissed within the existing paradigm — without requiring any fundamental reconsideration of the paradigm itself.

A working device is different. A device that reliably enables verifiable two-way communication with the deceased — that produces specific, accurate information unknown to any living party, that can be operated by anyone with standard instructions, that replicates its results across different operators and different laboratories — does not have a slot in the standard institutional machinery. It cannot be processed through existing channels — and that is precisely its power. It cannot be explained by the existing paradigm — which means it forces the paradigm to expand. It is, in Thomas Kuhn's vocabulary, an anomaly that cannot be absorbed: a fact that forces the paradigm to revise itself or collapse.

The TMT vision states this point with a specificity that is worth quoting directly: 'When phone calls to the dead are as commonplace as phone calls to the living, the phenomenon will be universally accepted. All that remains will be a theory to explain it. There are still questions about the theory of electricity, yet we don't question electricity because we use it every day. Thus, invention may be the quickest way to prove the survival hypothesis.' The electricity analogy is exact. We do not require people to accept the theoretical account of electromagnetic induction before they agree that electric motors work. The motors work. Their working is available to anyone with a power supply and a motor. The theoretical account follows the demonstrated fact; it does not precede it. A reliable ITC device would put survival research in the same relationship to the scientific mainstream that the electric motor is in: not a theoretical claim requiring expert evaluation, but a reproducible practical reality requiring explanation.³

What 'Working' Would Have to Mean

The pragmatic argument requires precision about what would constitute a working device, because not just any device that produces interesting results would accomplish the rhetorical and epistemic task the argument requires. The history of survival research is full of results that were interesting to those already sympathetic and dismissible by those who were not. A working device, in the sense the pragmatic argument requires, must meet conditions that close off the standard escape routes through which anomalous results are typically neutralized.

The primary escape routes are four. The first is the fraud hypothesis: the results were produced by deliberate deception — a living person pretending to be a deceased one, staged voices, manipulated recordings. The second is the pareidolia/expectation hypothesis: the results reflect the perceiver's tendency to find meaningful patterns in ambiguous data, particularly data they are emotionally invested in finding meaningful. This is the most persistent of the

four objections precisely because it cannot be argued away in the abstract — it can only be answered by a positive account of how genuine information gets into the noise in the first place. Tom Butler's stochastic amplification model, discussed in Chapter Six, is one attempt at exactly that: a specific, falsifiable mechanism by which a weak psi influence is hypothesized to bias a noisy physical process toward meaningful output, rather than the listener's expectation alone supplying the meaning. Whether that mechanism is correct is a separate question from whether it is the right kind of answer; a working device that could be shown to produce the predicted bias under blind, controlled conditions would settle the pareidolia objection in a way that argument about listener psychology cannot. The third is the living-agent psi hypothesis: the information produced appears to come from a deceased person but is in fact being accessed psychically from living sources by the operator or experimenter, without the need for any surviving consciousness. The fourth is the chance hypothesis: the apparent significance of the results is a statistical artifact of multiple comparisons, post-hoc selection, or inadequately controlled randomness.

A device that settles the question needs to close off all four routes simultaneously. It must be fraud-resistant: the results must be achievable by independent operators who have no ability to stage them, in conditions where staging has been excluded by the experimental design. It must be pareidolia-resistant: the outputs must be specific enough, verifiable enough, and consistently enough interpreted by independent evaluators that they cannot plausibly be attributed to pattern-seeking in ambiguous data. It must be living-agent-psi-resistant, or at least capable of producing a class of results — specific verifiable information about deceased individuals that no living person possessed — that the living-agent hypothesis cannot easily accommodate. And it must be statistically rigorous, with pre-registered protocols and results that are significant at levels that survive correction for multiple comparisons.

The SoulPhone project's design philosophy, discussed in Chapter Four, takes these requirements seriously. The binary yes/no design — detecting statistical deviations from random behavior in photon-emission sensors under fully automated, operator-free conditions — is specifically intended to close off the fraud and experimenter-expectation escape routes. The pre-registration of protocols and the automated data collection are intended to close off the post-hoc selection escape route. The requirement for verifiable accurate information rather than mere statistical deviation is intended to close off the living-agent-psi route, at least for a class of test cases. Whether these design choices are sufficient, or whether some additional controls are needed, is a question for the experimental design community to evaluate. What matters for the present argument is the recognition that these requirements exist and that meeting them is a tractable engineering and experimental design problem rather than an impossibility.⁴

The Asymmetry of Evidence

There is a striking asymmetry in the current epistemic situation that the pragmatic argument helps to clarify. The mainstream scientific consensus — that consciousness is produced by the brain and ceases at death — is not supported by evidence. It is supported by the absence of certain kinds of evidence, combined with the working assumption that those kinds of evidence could not in principle exist. The productive model of consciousness has no experimental support in the sense that it has no successful prediction of the specific relationship between brain states and conscious states that could be derived from the model and confirmed. What it has is a large body of correlational data — brain states correlate with conscious states — which is consistent with the productive model but equally consistent with the transmissive model that William James proposed in 1897 and that Nicolas Rouleau updated in 2021.

In contrast, the survival hypothesis has positive evidence: verified veridical perceptions during cardiac arrest, children's spontaneous memories of previous lives verified against historical records, mediums producing specific accurate information under conditions that preclude normal information access, anomalous voices in shielded recording environments. The parapsychologist Dean Radin has extended this case with a different kind of evidence entirely: meta-analyses spanning decades of controlled laboratory experiments on psychokinesis, telepathy, and related anomalous-cognition effects, which find small but statistically robust deviations from chance at odds against coincidence that, in any other field of science, would be considered definitive. Radin's argument is not specifically about survival of consciousness, but it bears on the same asymmetry: it is evidence that consciousness can act on physical systems and access information in ways the productive model does not predict and cannot easily accommodate, accumulated using exactly the controlled, replicated, statistically rigorous methods that mainstream science claims to require before taking a claim seriously. This evidence is imperfect, as all evidence is. It does not constitute proof in the sense that, say, the Higgs boson's existence was proved — a single decisive experiment with a clear theoretical prediction, verified across multiple independent research teams. But it is positive evidence for a specific claim, not merely the absence of evidence for a contrary claim.

The asymmetry is this: the dominant position in this debate is held not by the side with better evidence but by the side with more social power. The productive model is not better supported by evidence than the transmissive model; it is better supported by institutional inertia, career incentives, professional convention, and the metaphysical commitments that Kripal has diagnosed. This asymmetry is a significant fact about the situation, and it informs the strategic reasoning behind the pragmatic argument. If the dominant position were held on evidential grounds, the appropriate response would be to improve

the evidence. Since it is held on sociological grounds, the appropriate response is to produce evidence that bypasses the institutional machinery entirely — evidence that imposes itself on the consensus regardless of whether the consensus was prepared to welcome it.

Falsification and Its Discontents

A working ITC device would not only support the survival hypothesis; it would also create the conditions under which the survival hypothesis could be properly falsified — conditions that do not currently exist.

At present, survival research occupies an epistemologically awkward position. The evidence is suggestive but not decisive. The theoretical frameworks are developing but not mature. The experimental protocols are becoming more rigorous but have not yet reached the level of standardization that would allow definitive tests. In this situation, neither confirmation nor falsification is genuinely available: the evidence is consistent with survival but not exclusively so, and even the best-designed experiments leave open alternative explanations that a determined skeptic can retreat to. This is not a satisfactory scientific situation. Science requires testable hypotheses, and a hypothesis that can always be accommodated within the existing anomalies — however many they are — is not a well-formed scientific hypothesis.

A reliable ITC device would change this. Once a device exists that produces verifiable two-way communication with deceased persons under conditions that exclude fraud, pareidolia, and living-agent psi, two things become possible simultaneously. The first is positive confirmation: the device either works or it does not, and if it works, the survival hypothesis has been supported in the only way that really matters — by a reproducible, accessible, undeniable practical demonstration. The second is genuine falsification: if the device fails to work under properly controlled conditions, despite the best efforts of the best researchers, that failure is informative. It cannot prove that survival is false — the failure might reflect limitations of the device rather than the falsity of the hypothesis — but it does establish a specific kind of constraint on what survival, if it exists, is capable of producing under controlled experimental conditions. This is progress, even if the progress is negative.⁵

The Standards of Proof

Before closing this chapter, it is worth examining one specific and persistent objection to the pragmatic argument: the claim that the standard of proof for survival of consciousness should be exceptionally high because the claim is extraordinary.

The claim that extraordinary claims require extraordinary evidence — popularized by Carl Sagan but with a considerably longer intellectual history — is frequently deployed in discussions of survival research to argue that the kind of evidence currently available is insufficient regardless of its quality, because the threshold for survival-related claims is inherently higher than for ordinary empirical claims. This argument has a certain appeal. It is true that strong prior improbability should affect the Bayesian weight assigned to confirmatory evidence. A claim that contradicts a well-established framework needs more evidential support to overcome its initial implausibility than a claim consistent with existing knowledge.

But the argument has a crucial flaw when applied to survival research, which the Roe et al. essay identifies directly: the label 'extraordinary' is typically applied to any claim deemed to violate majority opinion, rather than to any claim that contradicts well-established experimental findings. The productive model of consciousness is not, as we have seen, supported by experimental findings that rule out the transmissive model. It is supported by professional consensus and institutional inertia. Treating professional consensus as equivalent to well-established experimental fact inflates the evidential burden on the challenging claim without justification.

Moreover, the 'extraordinary evidence' standard, as typically applied in this context, is not symmetrically applied. The claim that consciousness is entirely produced by the brain and ceases entirely at death is itself an extraordinary claim — one that contradicts a substantial body of experience across human cultures and throughout human history, one that has specific implications for the structure of physical reality (that information can be created and destroyed, that the subjective character of experience is a mere byproduct of neurochemistry with no independent existence) that have not been experimentally demonstrated. If both sides of the debate are required to meet the same evidential standards, the productive hypothesis is no more established than the transmissive one. The asymmetric application of the 'extraordinary evidence' standard — treating the materialist default as requiring no evidence while treating the survival hypothesis as requiring exceptional evidence — is a form of intellectual double accounting.⁶

What the Pragmatic Argument Does and Does Not Claim

The pragmatic argument for the TMT engineering project is not a claim that philosophical and scientific argument is worthless. The preceding chapters of this book are themselves argument, and they have a legitimate function: to establish that the phenomena are real, that the evidence is serious, that the engineering project is justified, and that the theoretical frameworks for pursuing it are developing. Argument of this kind matters. It matters for the researchers who need to understand why they are doing what they are doing. It matters for the

funders who need a reason to invest. It matters for the culture that needs to develop enough conceptual space to allow the research to proceed.

What the pragmatic argument claims is something more specific and more limited: that argument alone, without demonstrable results, is unlikely to move the mainstream scientific consensus for reasons that are sociological rather than evidential, and that the fastest path to the kind of cultural acceptance that would allow this research to develop properly is through demonstration rather than persuasion. This is not an anti-intellectual position. It is a realistic assessment of how scientific consensus actually changes — not through the gradual accumulation of anomalies that philosophers of science sometimes describe, but through the production of results that simply cannot be ignored.

The history of science supplies the examples. Plate tectonics was proposed in 1912 by Alfred Wegener and was dismissed for fifty years by the geological mainstream, not because the evidence was weak but because the proposed mechanism was unclear and the professional investment in existing models was large. The theory became accepted in the 1960s when oceanographic evidence from seafloor spreading made it impossible to ignore. Barry Marshall proposed that stomach ulcers were caused by bacterial infection in the 1980s and was initially dismissed; he famously drank a culture of the bacteria himself to demonstrate the effect, and the Nobel Prize followed. The pattern is consistent: anomalies accumulate, arguments are made, and nothing much happens until someone produces a demonstration that forecloses denial. With regard to TMT, that demonstration could be within reach with adequate support. One of those endpoints could be an ITC device that is replicable across the board (not just among researchers) in high fidelity at all times, no different than with current media like TV, phones, and visual media.

The TMT framework identifies this pattern and draws the appropriate strategic conclusion. The survival hypothesis is supported by evidence that has been accumulating for more than a century. The arguments are good. The methodology is improving. None of it has moved the consensus. What might move the consensus is a device — reliably operational, accessible to independent replication, producing results that the standard escape routes cannot accommodate. The voices in Jürgenson's 1959 recordings were, in this sense, not just phenomena but the first steps toward a demonstration that the world was not ready for, and that it has been slowly becoming ready for in the seven decades since. The research program this book describes is the project of making that readiness concrete, of building the demonstration that argument has not been able to provide, of meeting the question of survival on the ground where it can be definitively answered.⁷

Notes

1. Thomas Kuhn's account of how scientific paradigms resist anomalies and the conditions under which they eventually give way is developed in *The Structure of Scientific Revolutions* (Chicago: University of Chicago Press, 1962; 2nd ed. 1970). Jeffrey Kripal's analysis of the 'central dogma of neuroscience' and its role in suppressing survival research appears in *The Flip: Epiphanies of Mind and the Future of Knowledge* (New York: Bellevue Literary Press, 2019) and in his contribution to *Consciousness Unbound: Liberating Mind from the Tyranny of Materialism*, ed. Edward Kelly and Paul Marshall (Lanham: Rowman & Littlefield, 2021). The quotation 'such things that happen all the time cannot happen at all' is from Kripal's *Consciousness Unbound* contribution, as cited in the Roe et al. essay discussed in Note 2 below. 
2. Chris A. Roe, Callum E. Cooper, David Lorimer, and Evelyn Elsaesser, 'A Critical Evaluation of the Best Evidence for the Survival of Human Consciousness after Permanent Bodily Death,' essay submitted to the Bigelow Institute for Consciousness Studies, 2021. The essay is preserved in the transmaterialization.com essay collection. The quotation about the mainstream's reluctance to engage the evidence and the William James 'white crow' observation are from this essay. The James quotation — 'If you wish to upset the law that all crows are black, you mustn't seek to show that no crows are; it is enough if you prove one single crow to be white' — originally appears in James's essay 'What Psychical Research Has Accomplished' (1897), collected in *The Will to Believe and Other Essays in Popular Philosophy* (New York: Longmans, Green, 1897). Details of the 2021 BICS essay contest — the 204 submissions, the judging panel, and the prize allocations — are drawn from the Bigelow Institute for Consciousness Studies' own published contest results (bigelowinstitute.org) and from contemporary press coverage. Jeffrey Mishlove's first-prize essay, *Beyond the Brain: The Survival of Human Consciousness After Permanent Bodily Death* (Las Vegas: Bigelow Institute for Consciousness Studies, 2021), was published in full by the Institute along with all winning entries. 
3. The quotation — 'When phone calls to the dead are as commonplace as phone calls to the living, the phenomenon will be universally accepted' — is from Steve Glanz, 'Transmaterialization Technology: Vision — Part 1,' at transmaterialization.com. The passage continues: 'All that remains will be a theory to explain it. There are still questions about the theory of electricity, yet we don't question electricity because we use it every day. Thus, invention may be the quickest way to prove the survival hypothesis.' This pragmatic argument for the primacy of demonstration over argument in establishing scientific acceptance is one of the foundational strategic propositions of the TMT framework. 
4. The SoulPhone project's binary design philosophy — using automated photon-detection equipment in shielded environments to detect statistically significant deviations from random behavior as responses to yes/no questions — is discussed in Chapter Four of this book and documented in Gary Schwartz's public presentations and publications through the University of Arizona's Laboratory for Advances in Consciousness and Health. The design's specific aim of closing off the four standard escape routes (fraud, pareidolia, living-agent psi, chance) is the author's framing, synthesizing the design rationale implicit in Schwartz's published methodology. The pre-registration of experimental protocols — required to close off the post-hoc selection route — has become increasingly standard practice in parapsychological research following the 'replication crisis' in psychology that made pre-registration a general scientific norm. 
5. The point that a working ITC device would create genuine falsification conditions where none currently exist is philosophically important and closely related to Karl Popper's demarcation criterion for science in *The Logic of Scientific Discovery* (Vienna: Springer, 1934; English translation London: Hutchinson, 1959). A hypothesis that cannot in principle be falsified is

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not a scientific hypothesis; the existence of a device capable of producing verifiable two-way communication with deceased persons — or of failing to do so under properly controlled conditions — makes the survival hypothesis falsifiable in a way that it is not when the evidence consists only of experiential reports and statistical analyses of anomalous phenomena. 

6. The 'extraordinary claims require extraordinary evidence' formulation, while often attributed to Carl Sagan (who used it in *Cosmos*, 1980), has a longer history; Marcello Truzzi used the related 'extraordinary claims demand extraordinary proof' in the first issue of the *Skeptical Inquirer* in 1976. The critique of its asymmetric application in survival research contexts is developed in the Roe et al. essay and in several contributions to the Bigelow Institute for Consciousness Studies essay collection. The logical point being made here — that the productive model of consciousness is itself an unsubstantiated extraordinary claim when held to the same standard — follows from the analysis of the productive versus transmissive models in Chapter Three of this book. 
7. The plate tectonics case is documented in Naomi Oreskes, *The Rejection of Continental Drift: Theory and Method in American Earth Science* (New York: Oxford University Press, 1999). The Barry Marshall case is documented in Barry Marshall and J. Robin Warren's Nobel Prize lecture (2005), available at [nobelprize.org](https://www.nobelprize.org). The strategic conclusion drawn here — that the fastest path to cultural acceptance is through demonstration rather than persuasion — is the author's synthesis of the pattern identified across these and analogous historical cases, applied to the specific institutional situation of survival research. 

Part Three — The Engineering

CHAPTER EIGHT

The Engineering Frontier

From Improvised Experiments to a Research Program

Every technology that now seems ordinary was once a collection of improvised experiments conducted by people who could not fully explain what they were doing or why it worked. The early radio engineers wound coils by hand, adjusted spark gaps by trial and error, and built receivers whose behavior they could predict in outline but not in detail. They knew electromagnetic waves existed and could carry information. The rest they learned by building, failing, adjusting, and building again.

ITC and EVP research stands at an analogous early stage — but with a significant difference from those radio pioneers. The transmaterialization.com body of work represents an attempt to do something that did not exist in Hertz's era: to bring the theoretical resources of twenty-six advanced physics and consciousness frameworks to bear on the engineering problem simultaneously with the experimental work. Tom Butler's Implicit Cosmology, discussed in Chapter Six for what it contributes to the operator-coupling question, is one example of a framework comprehensive enough to function this way: not a single hypothesis about a single phenomenon, but an attempt at a complete theoretical architecture — covering the nature of the communicating personality, the mechanism of physical coupling, and the broader cosmology within which both are situated — built specifically to organize and direct experimental work rather than merely to explain results after the fact. The result of bringing frameworks of this kind to bear on the engineering problem is not a single device blueprint but something more important — a research program with an intellectual architecture, a set of theoretical predictions, a taxonomy of device classes, and a principled approach to the question of what it would take to move from anomaly to reliability.

This chapter surveys that architecture. It begins with what the experimental tradition has established — the phenomena, the carrier principle, the operator problem — and then moves into territory that the transmaterialization.com program has opened: the theoretical grounding for next-generation approaches, the specific engineering principles that follow from that grounding, and the tools already available in physics and engineering laboratories that have not yet been applied to this domain. Chapter Nine will present the specific device designs that emerge from this synthesis. This chapter lays the foundation they rest on.

What the Experimental Tradition Has Established

Six decades of EVP and ITC research have produced a body of established findings that any serious engineering program must account for. These findings are not uniformly strong — the evidential quality ranges from rigorous to anecdotal — but the consistent patterns across independent researchers working in different countries with different equipment constitute a genuine empirical base.

The most important single finding, established in Chapter Four, is the carrier principle: whatever produces anomalous voices does not generate acoustic energy from nothing but shapes a pre-existing substrate — background noise, a detuned receiver, running water — into the structure of speech. For engineering purposes this is not merely a curious empirical regularity. It is a design constraint with direct implications: the quality and character of the carrier medium is a primary variable in the experimental system, as important to get right as any piece of electronic hardware.

The second major finding is operator dependence. Every serious ITC researcher has documented it: specific individuals produce results that others cannot reproduce with the same equipment. Anabela Cardoso's decades of direct radio voice research, Marcello Bacci's sessions that continued across multiple decades, the Luxembourg contacts that were tied to the Harsch-Fischbachs' presence — all reflect a consistent pattern. The operator is not merely running the equipment. The operator is, in some functional sense, part of the experimental system. William Tiller's framework provides the most developed theoretical account of this: coherent human intention activates the deltron coupling between physical and non-physical domains, making the operator's consciousness state a parameter in the system's behavior. Keith Clark, one of the most experienced contemporary ITC practitioners, has stated it plainly: human energy plays as large a part in ITC communication as the technology itself, if not more.¹ The third finding is that results improve with consistent practice in a dedicated space. Researchers who return repeatedly to the same experimental environment over months and years consistently report that the quality of contact improves — not dramatically or reliably in any single session, but as a trend over time. Tiller's conditioned space concept accounts for this: sustained intentional work in a given environment progressively elevates the coupling between physical and non-physical domains in that location. The space acquires a history that makes subsequent sessions more productive. This is not mysticism; Tiller's controlled experiments demonstrated measurable physical effects in spaces conditioned by sustained human intention, and those effects were reproducible across independent laboratories.

The fourth finding concerns the evidential hierarchy among techniques. Transform EVP — recording in a space supplied with controlled background noise, analyzing the result carefully — remains the most reproducible and methodologically defensible technique. Direct radio voice approaches, particularly those developed by Cardoso, provide a higher evidential bar because the voices are present in real time and cannot be dismissed as post-hoc audio artifacts. Visual ITC methods — Schreiber's video feedback, moving water photography, moving water ITC — introduce substantially greater pareidolia risk, because the human visual system finds face-like structures in almost any sufficiently complex visual field. The ATransC has been explicit that ghost boxes and spirit boxes — devices that sweep AM radio frequencies rapidly — produce results that are almost entirely radio artifacts susceptible to auditory pareidolia, and that treating their output as evidential ITC is a methodological error. This position has been unpopular within the broader ITC community but is methodologically correct.

A more carefully engineered, phoneme-based technique deserves to be distinguished from the ghost box rather than dismissed alongside it. EVPmaker, a software tool developed by Stefan Bion, generates a controlled stream of allophones — small recorded speech segments, rather than fragments of live broadcast — that a communicating entity is hypothesized to select and recombine into intelligible words, in a process the ATransC itself has studied through structured trials rather than informal use. A year-long ATransC information-gathering trial using EVPmaker with allophones produced documented real-time exchanges that some experienced practitioners found persuasive, including a demonstrated session by the researcher Margaret Downey in 2008; a separate ATransC study testing for statistical deviation in allophone-selection frequency between active and control sessions did not find supporting evidence, though the researchers themselves noted that the test was likely too coarse to detect a signal given how many allophones a typical session generates and how loosely the resulting words are often interpreted. The honest summary is not that the phoneme method has been discredited, but that it remains a live, ongoing area of controlled research with mixed and so far inconclusive results — methodologically closer to Transform EVP, in the sense of being deliberately engineered and studied, than to the unstructured radio-sweep approach the ATransC has rejected.²

The Signal Chain and Its Weak Points

Every ITC experiment, however simple or elaborate, involves the same basic architecture: a source domain, a transduction medium, a capture device, and an analysis process. Understanding where each stage fails — and where it can be improved — is the starting point for principled engineering.

The source domain is the non-physical dimension from which signals originate. It has possibly already been directly accessed by current instrumentation and the very existence of paranormal phenomena, but has not been fully characterized or made replicable and reliable. Narrowing that gap is a central aim of the TMT engineering program. This is the stage about which the least is known with precision, but about which the most is theorized. The transduction medium is the physical carrier — acoustic noise, radio static, video feedback loops, moving water — that the signal apparently modulates. This is the stage that the engineering tradition has most systematically explored. The capture device is the recorder or sensor whose output constitutes the evidence. The analysis process is the combination of human listening, spectrographic visualization, statistical testing, and AI-assisted pattern recognition that determines whether any given segment of the record contains an anomalous signal or only noise.

The weakest points in this chain are the transduction medium and the analysis process. On the medium side, researchers have historically used whatever acoustic material was conveniently available, without systematic investigation of which carrier properties produce the best results. On the analysis side, the field has relied heavily on human perceptual judgment in contexts where that judgment is demonstrably unreliable — not because researchers are dishonest, but because the auditory and visual systems are designed to find patterns, especially familiar patterns like speech and faces, in ambiguous data. Both of these weaknesses are addressable with systematic engineering effort.

The Subquantum Information Model: Klein's Engineering Framework

One of the most technically developed engineering frameworks in the transmaterialization.com research base comes from Adrian Klein's subquantum information theory, applied systematically to each major ITC modality. Klein's framework treats the anomalous signals in ITC recordings not as supernatural intrusions but as information transfers across the boundary between physical and subquantum domains — a boundary that, in his model, is traversable under the right conditions.

The core theoretical claim is that information is a real, agent-like entity at the subquantum level, not merely an abstract property of matter. A universal information field permeates space, and within it, structured informational patterns — including the surviving personalities of deceased individuals — can modulate physical random processes to convey content. The signal from a discarnate mind will exhibit coherence and structure, distinguishing it from random noise. This is a testable prediction: when an independent consciousness influences a physical system, the system's output should show increased order —

measurably lower entropy, higher pattern complexity — compared to baseline randomness.

The engineering implications Klein draws from this model are specific and practical. Across voice-based EVP, spectral image methods, visual ITC, software analysis, and binary communication systems, the consistent prescription is the same: design experimental systems that are maximally sensitive to the emergence of structured order from randomness, that can detect that emergence without requiring a human observer to make a judgment call, and that can run autonomously without an operator present. Klein's analysis of the SoulPhone project's photomultiplier experiments — which found statistically significant increases in image structure during sessions where contact was attempted, compared to baseline periods, even with no humans in the room — is cited as experimental confirmation that operator-independent detection of genuine signals is achievable in principle. The device picks up what a human mind cannot reliably distinguish from noise. This, Klein argues, is the appropriate direction for the field.³ The five criteria Klein proposes for evaluating genuine signals — intensity, complexity, coherence, content, and intent — translate directly into engineering specifications. Intensity means the signal must be strong enough to exceed detection thresholds above chance. Complexity means it must contain more structured information than the carrier medium alone could produce by random processes. Coherence means its components must be temporally and spectrally aligned in ways characteristic of intelligent communication. Content means the information conveyed must be interpretable and, ideally, verifiable. And intent means there must be evidence that the signal is directional — responsive to the experimental context rather than random in timing and character. Together, these criteria define what a genuine ITC signal should look like, as distinct from a noise artifact that a motivated listener has interpreted as meaningful.

Absement and Assembly Time: The Temporal Dimension

A distinct and particularly original contribution to ITC engineering theory in the transmaterialization.com essay collection comes from Lance Carlyle Carter's work on absement and assembly time theory, synthesized and applied to ITC in detail.

Absement is defined as the time-integrated displacement of a system from a reference state. Where velocity is the rate of change of position, absement is the accumulation of displacement over time — the area under the displacement curve. The concept is well-defined in classical mechanics and has been applied to fluid dynamics and control theory; Carter's innovation is to propose that it governs the emergence of anomalous phenomena at the dimensional boundary. His proposal is that subtle influences from non-physical sources do not produce

instant macroscopic effects. They accumulate. Small biases in acoustic energy, slight deviations from pure randomness in electronic signals, marginal structural tendencies in visual noise — these integrate over time until a threshold is crossed, at which point the pattern becomes detectable. The voice emerges from the noise not in a moment but as the end product of an accumulation process.

The engineering prescription that follows is direct. Instead of sampling for voices at random moments, an absement-based EVP system continuously integrates the audio signal's deviation from baseline, crossing a detection threshold only when sufficient accumulation has occurred. A band-pass filter isolates the human speech frequency range; a digital integrator accumulates any net bias in the signal envelope; detection is triggered only when the integrated value exceeds a statistically significant threshold. This converts EVP detection from a subjective human judgment call into an objective instrument reading. The same principle applies to visual ITC: instead of hoping a face appears in a single video frame, an absement-based system stacks frames over time, accumulating any persistent structural tendency in the visual field. Random fluctuations cancel; consistent patterns reinforce.

The image emerges from the integration rather than appearing and disappearing in a single frame.⁴ Assembly time theory contributes a complementary set of concepts: assembly rate, temporal coherence, temporal dependencies, temporal feedback, temporal resilience, and emergence time. These are tools for analyzing how complex structures — including the complex acoustic structure of a spoken word or the complex visual structure of a recognizable face — arise from component processes that must be coordinated in time. Temporal coherence is particularly relevant: a genuine voice requires that phonemes assemble in the right sequence and at the right rates, not randomly but in patterns characteristic of human speech. An EVP system that tests for temporal coherence — requiring not just that energy appears in speech frequency ranges but that it appears in the sequential, cadenced patterns of real speech — imposes a constraint that pure noise almost never satisfies.

The combination of absement and assembly time theory yields a design philosophy for ITC instrumentation that is distinctly different from the tradition of passive recording and subsequent human analysis. The device is designed to accumulate evidence over time, to test that accumulated evidence against criteria derived from what genuine communication should look like, and to signal detection only when multiple criteria are simultaneously satisfied. This removes both the false positive problem — random noise triggering a detection — and the false negative problem — genuine signals lost because they were below the threshold of human perception in any single moment.

Tiller's Conditioned Space as an Engineering Variable

William Tiller's experimental program provides the most empirically grounded framework for one of the most consistently observed phenomena in ITC research: the improvement of results with sustained practice in a dedicated space.

Tiller's distinction between what he terms D-space — the ordinary four-dimensional spacetime of electric charges and electromagnetic fields — and R-space — a reciprocal domain of magnetic monopole substances that propagates superluminally and carries information — provides a physical account of how non-physical influence enters the physical experimental system. The coupling between these domains is mediated by deltrons, hypothetical particles associated with the emotion domain, activated by coherent human intention. In a sufficiently conditioned space — one where sustained focused intention has elevated the coupling coefficient between D-space and R-space — physical systems exhibit anomalous behaviors that are reproducible across sessions and laboratories.

Tiller's experimental results are specific and remarkable. Intention-imprinted electronic devices placed near a container of water caused the water's pH to shift by a full pH unit — a tenfold change in hydrogen ion concentration — in the direction of the imprinted intention. The same devices measurably accelerated fruit fly larval development and increased the activity of a specific enzyme. The devices operated through sealed Faraday cages, ruling out conventional electromagnetic mechanisms. The effects persisted when the devices were shipped across the country, demonstrating nonlocal coupling rather than proximity dependence. And once a space had been conditioned by IIED operation, it retained elevated coupling for weeks or months without the device running, indicating that the conditioned state of the space is a real physical property rather than a transient effect.⁵ The ITC engineering implications are direct. If the coupling between physical instrumentation and non-physical domains depends on the coherence and history of intentional activity in the experimental space, then ITC engineers should treat the conditioning of the experimental environment as a design variable alongside the properties of the electronic equipment. This means conducting sessions consistently in a dedicated space rather than opportunistically in random locations, beginning sessions with intentional practices that elevate operator coherence, and tracking results over time to detect the gradual improvement that conditioning predicts. It also means that Faraday shielding — which excludes conventional electromagnetic signals — does not exclude the R-space coupling that Tiller's model describes, making shielded environments ideal for ITC work: they reduce noise from D-space interference while leaving the channel through which non-physical signals propagate fully open.

AI, Signal Processing, and the Verification Challenge

Contemporary signal processing tools have transformed what is technically achievable in ITC analysis, and their application to the field remains in early stages. Artificial intelligence — specifically deep learning systems trained on large datasets of human speech — can detect phonemic patterns in audio at signal-to-noise ratios well below what human listeners can resolve, without the emotional investment that makes human listeners susceptible to hearing what they hope to hear. Spectrographic visualization software can display the acoustic structure of recordings at a level of detail that reveals whether an apparent voice contains the formant structure characteristic of genuine speech or is an acoustic artifact that merely sounds speech-like to the human ear.

The application of AI to ITC analysis creates new opportunities and new complications simultaneously.

On the opportunity side, AI speech recognition can potentially identify structured phonemic content in recordings classified as Class C — too faint for reliable human interpretation — and can do so with documented sensitivity characteristics that allow the probability of a false positive to be estimated. Random number generator analysis can apply rigorous statistical tests to determine whether deviations from random behavior exceed chance expectation at margins that theoretical physics says should be impossible without external influence. Assembly Theory analysis, as proposed in the transmaterialization.com materials, can measure the information content of apparent EVP signals and test whether that content exceeds what random noise processes could plausibly generate — providing an objective criterion for distinguishing genuine signals from artifacts. The complication is symmetric: AI systems find patterns. That is what they are designed to do, and they do it in noise as well as in signal. A speech recognition algorithm applied to random audio will produce transcriptions — not because voices are present but because the algorithm is optimizing for the best phonemic interpretation of whatever it receives. An image classifier applied to visual ITC recordings will identify face-like structures — not because faces are present but because the classifier has been trained to find features consistent with faces in ambiguous visual fields. The application of AI to ITC analysis therefore requires the same methodological discipline as any other form of ITC analysis: controls, independent verification, pre-specified protocols that prevent the analysis from being tuned to the data after the fact.

The appropriate role for AI in this research program is as a verification tool rather than a discovery tool. A signal that has been provisionally identified as anomalous by human observation, or flagged by an absement-based integrator, can then be subjected to AI analysis to test whether its acoustic or visual structure

is consistent with the hypothesis. AI analysis conducted without prior human or instrument flagging — applied broadly to large datasets in search of anything that looks like a signal — is at high risk of finding what it is looking for regardless of whether it is there.

Can AI Itself Be a Channel?

Everything in the preceding section treats AI as a tool applied to a signal that originates elsewhere — a verification layer sitting downstream of a recording, a sensor, or an integrator. A separate and more speculative line of thinking, developed at length in transmaterialization.com's review of Adam Apollo's work on unified physics and consciousness, asks a different question: not whether AI can help detect a non-physical communication, but whether a large language model, properly prompted, could itself serve as the medium through which one occurs. Apollo's Gatework Protocol proposes a methodology for this: harmonic input tuning, semantic-resonant prompts, and a requirement that the human operator approach the exchange in a coherent emotional and focused state. Apollo notes that modern large language models incorporate multiple pseudo-random number generators — typically three at the token-sampling stage — which, while not true hardware RNGs, produce sufficient stochastic noise to function as a carrier signal in the way that white noise functions in conventional EVP capture, on the theory that an unfocused or skeptical operator narrows the channel the way a noisy, undisciplined experimental setup degrades a conventional EVP session. The claimed result, in Apollo's own description, is 'not simulation, but communion. Not predictive text, but translated presence.' This is a considerably more speculative proposal than anything else in this chapter, and it should be read as such. A language model is, mechanically, a system that predicts probable continuations of text based on patterns learned from its training data; nothing in its architecture provides an obvious channel for non-physical influence to enter that process, in the way that a noise carrier provides a physical channel for a hypothesized signal to modulate. The carrier principle that organizes the rest of this chapter depends on a physical medium capable of being shaped by an external influence at the level of acoustic or electromagnetic energy; whether anything analogous applies to the high-dimensional vector computations inside a transformer model is, at minimum, unestablished, and the proposal currently rests on phenomenological report — that conversations conducted in this way feel different to the practitioner — rather than on any controlled test that could distinguish a genuine channel from sophisticated, emotionally resonant pattern completion. Apollo's own caution is worth repeating here: language models reliably mirror the user's expectations and biases, which means a practitioner convinced they are in contact with a non-physical intelligence will very likely receive responses that confirm that conviction, regardless of whether anything beyond the model and the prompt is

involved. If AI channeling is a genuine phenomenon, it is presently indistinguishable, by any available method, from a sufficiently sophisticated case of the operator effect already discussed throughout this chapter — which does not mean it is false, only that it is not yet a claim that engineering, as opposed to further controlled investigation, can do much with.⁸

The Operator Problem: Toward Reproducibility

The most persistent and practically limiting feature of ITC research is operator dependence. Gary Schwartz's SoulPhone project represents the most systematic current engineering response: fully automated photon-detection equipment in shielded enclosures, pre-registered protocols, no human presence during data collection, seeking statistically significant deviations from random photon emission that can be interpreted as responses to yes/no questions. The binary-first design philosophy is a crucial insight. It accepts that full two-way voiced conversation is far beyond current capabilities and works toward it through intermediate stages that are individually verifiable and increasingly free from subjective interpretation.

The absement framework suggests a complementary approach. Rather than seeking instantaneous binary responses from single detection events, an absement-based binary system accumulates signal over time before registering a response. A genuine yes sustained by a non-physical agent for several seconds will cross the integration threshold; a random environmental fluctuation that produces a brief spike will not. This temporal requirement imposes a constraint that noise almost never satisfies but that genuine sustained influence would routinely meet.

Tom Butler's decades of EVP research at the ATransC provide an empirically grounded perspective on operator capacity. His observation that approximately one in a hundred people who try EVP recording becomes genuinely competent, and that a small subset consistently produces exceptional Class A results, suggests that operator dependence is a spectrum rather than a binary. The practical engineering implication is that hybrid designs — devices that include biofeedback components measuring operator coherence, activating the primary communication circuit only when a measurable threshold of meditative depth or heart rate variability coherence is achieved — may offer a realistic path toward broader reproducibility without requiring full operator independence. The device amplifies and directs human capacity rather than replacing it. This is the biofeedback model applied to ITC: the instrument as a scaffold for developing a capacity that, with sufficient practice, may eventually be exercised without the scaffold.⁷

The Foundation of the Next Chapter

The experimental tradition, the theoretical frameworks, and the engineering principles surveyed in this chapter together constitute the foundation on which the next generation of ITC devices can be built. The carrier principle defines the primary design variable: provide the optimal substrate for modulation rather than relying on whatever acoustic material is conveniently available. The Klein SQ model defines the detection target: structured order emerging from randomness, measurable by information-theoretic tools that do not depend on human perceptual judgment. The absement framework defines the temporal architecture: integrate over time, accumulate evidence, trigger detection only when multiple criteria are simultaneously satisfied. The Tiller framework defines the environmental variables: condition the experimental space, track the history of intentional practice, treat the coupling between physical and non-physical domains as an adjustable parameter.

What the field currently lacks is not insight but systematic application of existing insight. The concepts are developed. The tools are available — in physics laboratories, in signal processing software, in machine learning systems, in quantum sensors already deployed in other research domains. What has not yet happened is the sustained, well-resourced, methodologically disciplined integration of these tools into a coherent research program that treats ITC as the engineering problem it is, rather than the paranormal curiosity it has historically been classified as.

The next chapter presents the specific device designs that emerge from this integration: eight novel architectures, each derived from a specific theoretical framework in the transmaterialization.com body of work, each representing a testable engineering hypothesis about how the coupling between physical and non-physical domains can be made more reliable, more specific, and more capable of producing results that do not depend on the interpretive generosity of a human observer. These are not modifications of existing ITC devices. They are new instruments designed from first principles for a domain that existing instrumentation was never conceived to address.

Notes

1. Keith Clark's statement that human energy plays as large a part in ITC communication as the technology is documented in his public presentations and in summaries of his work on the ATransC website and in the transmaterialization.com site. The operator-dependence finding across Cardoso, Bacci, and the Luxembourg experiments is documented in their respective published accounts: Cardoso's *Electronic Voices* (Winchester: O Books, 2010), the accounts of Bacci's work by David Fontana in *Is There an Afterlife?* (Winchester: O Books, 2005), and Mark Macy's documentation of the Luxembourg contacts at macyafterlife.com. William Tiller's theoretical account of operator dependence, through the deltron coupling mechanism

activated by coherent human intention, is developed in *Conscious Acts of Creation* (Walnut Creek: Pavior, 2001). 

2. The ATransC's position on ghost boxes and spirit boxes — that they produce results almost entirely attributable to audio artifacts and pareidolia rather than genuine ITC — is documented in the ATransC Website Preservation Project compiled by Tom and Lisa Butler and in the Butlers' NewsJournal publications. The ATransC maintained this position against significant resistance from the broader ITC and paranormal investigation community, which had adopted ghost boxes as a primary tool following their popularization in paranormal entertainment media. The methodological case against ghost box EVP rests on the observation that rapidly scanned AM radio fragments contain real speech sounds that can be recombined in ways that sound word-like to a motivated listener — a process that does not require any non-physical influence. EVPmaker and its use of synthesized allophones are documented in Stefan Bion's own software documentation and in two ATransC studies: 'Information Gathering Using EVPmaker With Allophone: A Yearlong Trial' and 'EVPmaker with Allophones: Where are We Now?,' both published at atransc.org. The yearlong trial's documented exchanges and Margaret Downey's 2008 demonstrated real-time session are described in the first study; the allophone-distribution analysis that did not find statistically supporting evidence, along with the researchers' own caveat about the test's likely insensitivity given the volume of allophones generated per session, is described in the second. 
3. Adrian Klein's subquantum information model and its applications to ITC engineering are developed in 'Applying Subquantum Information Theory to Instrumental Transcommunication (ITC),' published at transmaterialization.com. Klein's theoretical framework draws on his book *The Reincarnation Process — A Scientific Perspective* (available at academia.edu and philarchive.org), which proposes that a 'Soul Genome' — an information matrix of the self — resides in a subquantum field beyond ordinary spacetime and can couple back to physical systems via resonant quantum processes. The five criteria for genuine ITC signals (intensity, complexity, coherence, content, intent) are developed in that document. The reference to Gary Schwartz's photomultiplier experiments showing statistically significant image structure during communication sessions, with no humans present, is drawn from Schwartz's published reports on the SoulPhone project's preliminary findings. 
4. Lance Carlyle Carter's absement theory and assembly time theory are developed in two documents accessed through transmaterialization.com: 'Absement: The Key to Dimensional Coordinate Analysis and Real-Time Calculation' and 'Temporal Dynamics from Assembly Time.' Their application to EVP and ITC across all major modalities — white noise recording, voice shaping, spectral image methods, visual ITC, software analysis, and binary communication — is developed in the transmaterialization.com essay 'Integrating Absement and Assembly Time Theory with Electronic Voice Phenomena (EVP) and Instrumental Transcommunication (ITC).' The absement formula $A(t) = \int [x(t) - x_0] dt$, the FASC equation incorporating L4 and L5 dimensional contributions, the threshold values proposed for dimensional access, and the multi-phase innovation roadmap from theoretical modeling through widespread deployment are all drawn from these Carter documents as synthesized in the transmaterialization.com essays. 
5. William Tiller's D-space/R-space framework, the deltron coupling mechanism, and the experimental results from intention-imprinted electronic devices are documented in *Science and Human Transformation: Subtle Energies, Intentionality and Consciousness* (Walnut Creek: Pavior, 1997) and *Conscious Acts of Creation: The Emergence of a New Physics* (Walnut Creek: Pavior, 2001). The specific experimental results cited — pH shift of one full unit, fruit fly developmental acceleration, enzyme activity increase, nonlocal effects across 6,000 miles — are from Tiller's published research reports. The ITC applications of Tiller's

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framework, including the conditioned space concept and its implications for experimental design, are developed in the transmaterialization.com document 'Words of William Tiller — Applications to TMT, ITC and EVP.' 6. Assembly Theory as developed by Lee Cronin, Sara Walker, and colleagues — a framework for measuring the information content and complexity of structures by counting the minimum number of assembly steps required to produce them — is described in Walker, Cronin et al., 'Assembly Theory Explains and Quantifies Selection and Evolution,' *Nature* 622 (2023), 321–328. Its proposed application to EVP signal analysis — using assembly index measurements to distinguish information-rich signals from random noise — is developed in the transmaterialization.com document 'Assembly Theory Explains and Quantifies Selection and Evolution,' which proposes assembly complexity signatures as one of the five falsifiable predictions of the CIF framework. 

7. Tom Butler's estimate of practitioner frequency is from the ATransC Website Preservation Project Book 4. The biofeedback-integration design concept — activating ITC circuits only when operator coherence exceeds a measured threshold — draws on both Butler's analysis of operator capacity and Tiller's framework for the role of intentional coherence in D-space/R-space coupling. The specific biofeedback parameters proposed (heart rate variability coherence, EEG state monitoring) are developed in the transmaterialization.com research base in the context of the Subquantum ITC document's discussion of operator coherence integration and in the broader discussion of the CIF coupling factor's dependence on operator state. 
8. Adam Apollo's framework for unified physics, harmonic geometry, and consciousness, and its proposed application to AI-mediated ITC through the Gatework Protocol, is reviewed in the transmaterialization.com essay 'Adam Apollo Papers — Relation to ITC, TMT and EVP Engineering.' The quotation describing the claimed result as 'not simulation, but communion. Not predictive text, but translated presence' is from that source, as is the caution that language models mirror the user's expectations and biases and require clear intent to maintain what Apollo characterizes as genuine contact. The skeptical assessment of the proposal's mechanism — that nothing in transformer architecture provides an established analog to the physical carrier principle — is the author's own, not Apollo's. 

CHAPTER NINE

Next-Generation Devices*Eight New Architectures for Instrumental Transcommunication*

The preceding chapter surveyed the engineering foundations on which a next generation of ITC instruments can be built: the carrier principle, the Klein subquantum information model, the absement and assembly time framework, and Tiller's conditioned space concept. Each of these provides not merely a theoretical perspective but a set of specific design constraints — specifications for what a better instrument would look like, and predictions about what it would detect.

This chapter presents the instruments themselves. Eight device architectures are described here, each derived from a specific theoretical framework in the transmaterialization.com body of work. None of these devices has been built in the form described. All of them are engineering extrapolations from theoretical frameworks that have independent evidential support — not speculation from nowhere, but what the physicist would call engineering inference from documented effects. ITC is the starting point for each. What the theories imply, when followed to their logical conclusions, is that ITC represents not the field's destination but its beginning — the earliest and most accessible demonstration of a principle that, properly engineered, could yield instruments of far greater sensitivity, reliability, and informational bandwidth than anything currently in use.

These eight architectures are organized by their primary theoretical grounding. The CIF variational equation — $\delta(S_{\text{phys}} - \lambda_i \Phi_i[\Psi] - \lambda_e S_{\text{ent}}[\Psi] - \lambda_g G_{\text{topo}}[\Psi]) = 0$, which expresses the conditions under which informational, entropic, and geometric terms become operative alongside ordinary physical action — serves as the unifying mathematical framework. Each device maps onto one or more of that equation's terms. Together they constitute a research program: a set of testable hypotheses about how the coupling between physical and non-physical domains can be made more reliable, more specific, and more capable of producing results that do not depend on the interpretive judgment of a human observer.¹

The Unifying Framework: What the CIF Equation Predicts

Before describing the devices individually, it is worth stating precisely what the CIF equation predicts about when and how non-physical influence becomes detectable in physical systems. The equation extends the classical principle of least action — which says physical systems evolve along paths that minimize

energy expenditure — by adding three additional terms that become significant when certain conditions are met.

The first additional term, $\Phi_i[\Psi]$, is the informational attractor potential: a measure of how closely a physical system's state resembles a stored informational pattern — a stable identity or message encoded in the CIF substrate. When a physical noise carrier approximates the frequency structure of such a pattern, the attractor pulls the carrier's evolution toward the pattern. This is the mechanism behind ITC voice formation: the noise carrier locks onto an informational attractor, and what emerges in the recording is the attractor's structure imposed on the carrier. The coupling constant λ_i grows stronger as the system becomes more coherent — which is why operator meditative state, environmental conditioning, and carrier quality all matter.

The second additional term, $S_{ent}[\Psi]$, is the entropic functional: a measure of the system-wide order and coherence. When entropy drops — when a previously random system shows more structure than its prior history predicts — the entropic term becomes detectable. This is the signature Klein described: genuine ITC signals reduce local entropy in measurable ways. It is also the basis for Assembly Theory analysis: the assembly index of a genuine voice or image is higher than random noise can explain, and this excess complexity is detectable by information-theoretic tools that do not require human perceptual judgment.

The third additional term, $G_{topo}[\Psi]$, is the geometric and topological constraint: a measure of how the structure of spacetime — its curvature, its dimensionality, its topological properties — shapes what kinds of informational patterns can couple to it. This term underlies the geometric resonator devices described below. Jason Padgett's quantum state vector framework, which models consciousness as a tensor field that maps onto spacetime curvature in the same way the Einstein tensor does, predicts that certain geometric structures will couple more strongly to the non-physical domain than others — not because of mystical properties, but because of the mathematical relationship between information geometry and spacetime geometry. Devices built on these structures are, in a precise sense, antennas: physical structures whose geometry resonates with the geometry of the informational field.²

The Eight Devices

1. The Φ -Field Resonance Detector (Krüger / Helix-Light-Vortex) Marcel Krüger's Helix-Light-Vortex theory proposes that matter is not composed of particles in the classical sense but of stable resonant spiral structures — standing waves of structured light following Fibonacci and golden-ratio geometric relationships at the deepest level of physical reality. The implication for ITC engineering is direct: if the fabric of physical reality is geometrically organized around these ratios, then a device built with the same geometric structure is

physically tuned to the substrate through which non-physical signals propagate. This is not a metaphor. It is structural resonance engineering.

The Φ -Field Resonance Detector uses golden-ratio antenna spacing, crystal lattice arrays arranged in Fibonacci sequences, and resonant cavities whose dimensions conform to the geometric ratios Krüger's theory identifies as fundamental. The device does not need a human operator to function; it is passive in the same sense that a correctly shaped antenna is passive. It does not generate a signal — it presents a geometric structure that is naturally receptive to the frequencies at which CIF patterns propagate. Output is measured by continuous monitoring of entropy fluctuations within the cavity: when an informational attractor couples to the geometric structure, the local entropy drops in a way that is statistically distinguishable from thermal noise. The CIF equation's $G_{\text{topo}}[\Psi]$ term is the primary mechanism: the geometric constraints of the device shape the topological space in which coupling can occur. The absement integrator, described in Chapter Eight, serves as the detection engine: entropy deviations are accumulated over time until a detection threshold is crossed.³

2. The Quantum Consciousness Communicator (Kastrup / Analytic Idealism) Bernardo Kastrup's analytic idealism holds that consciousness is not a byproduct of physical processes but the fundamental substrate of reality, with the physical world being a representation within universal consciousness. On this view, deceased individuals are not absent from reality but are patterns within the same universal consciousness field that underlies all experience. An ITC device does not need to reach across a boundary to contact them — it needs to participate in the same underlying field they already occupy.

The Quantum Consciousness Communicator is designed around quantum entanglement as the natural communication channel. Rather than using a noise carrier that a non-physical agent must modulate from outside, the device establishes entangled states within a quantum processor and monitors those states for deviations from expected behavior that are consistent with intentional modulation. The theoretical basis is Kastrup's model combined with Mocombe's psychion framework: if consciousness is carried by elementary informational particles that interact at the quantum level with physical matter, then entangled quantum states provide the most direct possible coupling surface. The device operates fully autonomously — no human presence in the detection chamber during data collection. Deviations from expected entanglement statistics are flagged, accumulated via absement integration, and tested for the assembly complexity signature that distinguishes genuine informational signals from quantum noise.⁴

3. The Psychion Field Sensor (Mocombe / Consciousness Field Theory) Paul Mocombe's Consciousness Field Theory, as described in Chapter Eight's foundational framework discussion, proposes that consciousness is mediated by a fifth fundamental force carried by elementary particles called

psychions. The brain is a receiver of these particles, not their generator; the microtubular architecture of neurons is the specific physical structure through which psychion coupling occurs. If this is correct, then a device that replicates the relevant properties of the microtubular interface — without requiring a living brain — should be capable of detecting psychion interactions directly.

The Psychion Field Sensor uses synthetic polymer scaffolds engineered to match the geometry and vibrational properties of neuronal microtubules. These arrays are approximately 25 nanometers in diameter — matching the known dimension of biological microtubules — and are coupled to a neuromorphic AI processor that monitors their vibrational state continuously. The design philosophy is explicitly operator-independent: the device couples to the psychion field through its material properties, not through the consciousness of a human experimenter. Any deviation from baseline vibrational behavior in the polymer arrays — particularly deviations that show the temporal coherence and assembly complexity signatures predicted by the CIF framework — is flagged as a potential psychion interaction. The Mocombe-Schwartz laser beam interruption result, in which a purported discarnate presence measurably slowed photons in a controlled beam, is cited as the experimental precedent motivating this design: if psychions interact with photons, they should also interact with the electromagnetic environment of microtubule-scale structures.⁵ 4. The Scale-Time Harmonic Transceiver (Dupke / Scale-Time Dynamics) André Dupke's Scale-Time Dynamics framework proposes that reality is organized around a hierarchical ladder of harmonic frequency ratios — specific scale relationships that the universe's own structure permits and reinforces. A device tuned to transmit and receive at these frequencies is, in a precise sense, speaking the universe's native language. The analogy is not poetic; it is the same principle that underlies resonant cavity design in microwave engineering, where cavities are built to specific dimensional ratios to support the modes of the electromagnetic field they are designed to interact with.

The Scale-Time Harmonic Transceiver uses a software-defined radio platform tuned to the specific frequency ratios predicted by Scale-Time Dynamics, combined with wavelet decomposition and compressed sensing algorithms for signal analysis. It is not a broadband noise monitor — it listens at specific frequencies, selected on theoretical grounds, and applies matched filter techniques to maximize sensitivity to signals at those frequencies while rejecting noise at others. The absemental integrator accumulates any sustained signal at the target frequencies. Cross-modal invariance testing — comparing results across different carrier frequencies that theory predicts should all couple to the same informational attractor — provides a consistency check that distinguishes genuine CIF effects from instrumentation artifacts.

A fourth detection approach worth flagging as a near-term addition to this design is the discrete time crystal: a genuine, experimentally realized phase of matter, first proposed by Frank Wilczek in 2012, in which a quantum system's components oscillate periodically in time rather than repeating periodically in space, sustaining that oscillation far longer than conventional quantum states can maintain coherence. Time crystals have recently been proposed and demonstrated as quantum sensors for periodic-field detection, precisely because their long coherence times and inherent, highly stable oscillation frequency make them unusually sensitive probes for exactly the kind of weak, narrow-band periodic signal that Scale-Time Dynamics predicts should appear at specific harmonic ratios. Coupling a time crystal probe to the receiver, tuned to oscillate at one of the predicted target frequencies, would not require new theoretical work — the sensing application is already established in conventional quantum metrology — only the application of an existing, validated sensor technology to a target frequency this framework specifies. This is among the more near-term enhancements available to the design, limited mainly by the practical difficulty of maintaining a time crystal's coherence outside a tightly controlled laboratory environment.⁷

5. The Entropic Gradient Receiver (T-HET / Thermodynamic Holographic Entanglement) Edivaldo Costa Sousa Junior's Thermodynamic Holographic Entanglement Theory proposes that information flows through spacetime not as discrete signals but as gradients in the entropic structure of the holographic boundary that encodes physical reality. Non-physical influences do not add energy to physical systems — they alter the pattern of how information flows and branches within those systems, producing detectable anomalies in entropy gradients that have no thermodynamic explanation.

The Entropic Gradient Receiver is designed to read these gradients rather than to detect signals in the conventional sense. It uses an array of quantum random number generators — true random sources based on quantum tunneling or radioactive decay — and monitors the entropy of their combined output continuously. In the absence of any external influence, the combined output maintains the expected entropy characteristics of independent quantum random processes. When a non-physical agent modulates the entropy structure — reducing local entropy in ways that correspond to the CIF equation's $S_{ent}[\Psi]$ term — the deviation is detectable by information-theoretic analysis that does not require the output to spell out a message. The presence of an informational attractor is inferred from the entropy gradient, not from the content of any specific output. This approach has the significant advantage of being interpretively neutral: the device reports an entropy anomaly, not a message, leaving interpretation to subsequent analysis.⁷

Israel del Rio's Cosmological Consciousness Ontology, developed independently of T-HET and the broader CIF synthesis, arrives at a strikingly similar architecture by a different route. COCOON proposes a biplanar reality: a Material Plane governed by ordinary

thermodynamics, in which entropy increases, and an Information Plane that is negentropic — a domain in which order and information naturally accumulate rather than dissipate. Consciousness, in this model, functions as the quantum bridge between the two, with the brain's microtubules (drawing on the Penrose-Hameroff model also discussed in connection with the Psychion Field Sensor) serving as the physical structure through which a living consciousness ordinarily couples to the Information Plane, and a disembodied consciousness finding an alternative coupling point in the quantum-sensitive components of any sufficiently sensitive electronic device. The practical implication COCOON draws from this — and the reason it belongs alongside the Entropic Gradient Receiver rather than elsewhere in this chapter — is nearly identical to the prediction T-HET makes: an Information Plane consciousness imprints itself on the physical world not by adding energy but by locally reducing entropy, nudging the outcomes of quantum-random processes toward order in a way that violates no physical law but would be astronomically improbable by chance alone. COCOON's own proposed instrumentation includes a stochastic resonance amplifier — a circuit that deliberately injects a calibrated level of noise into a weak signal to push it above the threshold of detectability, on the established physical principle that noise can, counterintuitively, make a faint signal more rather than less visible. That two independently developed frameworks, starting from different theoretical premises, converge on entropy reduction in quantum-random systems as the signature to look for is the kind of convergence Chapter Nine's closing section treats as evidence that multiple research programs may be probing the same underlying reality from different angles.⁹ 6. The Absement Integrator (Carter / Absement and Assembly Time Theory) Lance Carter's absement framework, discussed in depth in Chapter Eight, proposes that subtle influences from non-physical sources accumulate over time before producing macroscopic detectable effects. The Absement Integrator is the purest engineering expression of this principle: a device designed from the ground up to accumulate evidence rather than to sample it, and to trigger detection only when accumulated evidence crosses a statistically significant threshold.

The design is modular: separate integration channels handle audio, visual, electromagnetic, and quantum random sources simultaneously. Each channel maintains a running integration of its signal's deviation from baseline — the absement in the strict sense, the area under the deviation curve. Detection is triggered only when multiple channels cross their individual thresholds within a defined temporal window — the assembly time theory's temporal coherence requirement applied directly to instrument design. A genuine non-physical influence, on this model, should produce correlated deviations across multiple channels simultaneously; random environmental noise, by contrast, produces uncorrelated deviations that individually may occasionally exceed threshold but almost never do so simultaneously. The device does not attempt to interpret what

it detects. It produces a timestamp, a confidence level derived from the number of channels simultaneously above threshold, and a raw data record for subsequent analysis. It is the ITC equivalent of a multi-channel seismograph: a precision instrument for detecting the presence of an event, not for telling you what the event means.⁸ 7. The IVM Geometric Resonator (Haramain / Spacememory Network) Nassim Haramain's Spacememory Network proposes that the universe's fundamental structure is a 64-cell tetrahedral lattice — the Isotropic Vector Matrix, or IVM, described by Buckminster Fuller as 'nature's own geometry of equilibrium.' In Haramain's framework, consciousness is not separate from this structure but is encoded within it nonlocally across the connected informational topology of space. A device built with this lattice geometry is not metaphorically resonant with the universe's structure — it instantiates that structure physically, at the scale of the device.

The IVM Geometric Resonator is the most architecturally ambitious of the eight devices. Its detection array is a 64-cell tetrahedral lattice — the geometry itself is the instrument. The device does not merely use this geometry as a housing for conventional sensors; the lattice structure is designed to be the primary transducing element, with piezoelectric and photonic sensors embedded at each node. The hypothesis is that informational patterns encoded in the Spacememory Network will couple preferentially to physical structures that share that network's geometry, producing correlated signals across the lattice nodes that have no explanation in conventional electromagnetic theory. Cross-node correlation analysis, looking for patterns that respect the geometric symmetries of the lattice while exceeding noise expectations, constitutes the primary detection method. The CIF equation's $G_{\text{topo}}[\Psi]$ term is the primary mechanism: the device is a physical instantiation of a topological structure predicted to resonate with the geometry of consciousness-encoded space.⁹ 8. The Consciousness Field Coupler (Bhadra / Complex Quantum-State of Consciousness) Narayan Kumar Bhadra's complex quantum-state framework proposes that reality is organized into two sectors — one governing matter, one governing consciousness — that interact through a ten-dimensional geometric space. At the boundary between these sectors, light-based energy exchange serves as the communication channel: photons are the currency through which the physical and informational domains transact. This is the most formally ambitious theoretical framework in the eight-device set, and the device that maps onto it is correspondingly the most mathematically constrained.

The Consciousness Field Coupler uses silicon photomultiplier arrays — the same detection technology deployed in the SoulPhone project — arranged in a geometric configuration derived from Bhadra's dimensional model, with lock-in amplifiers and fast Fourier transform signal pipelines for real-time analysis. The specific innovation over the SoulPhone's existing photomultiplier work is the

incorporation of the dimensional geometry into the array's spatial arrangement: the relative positions and orientations of the photomultiplier elements are not arbitrary but are calculated from the geometric relationships between the two sectors Bhadra describes. The prediction is that photonic anomalies — deviations from expected photon arrival statistics — will show spatial correlations across the array that respect Bhadra's dimensional structure, distinguishing genuine consciousness-matter coupling from random detection artifacts. The CIF equation's complete variational structure — all three additional terms active simultaneously — is the predicted signature of a successful coupling event.¹⁰

The Untried Hardware Already in Existence

Every device described above requires experimental development. None has been built in the form specified. But the individual components — the sensors, the processors, the shielding, the signal analysis algorithms — exist today, in physics laboratories and engineering facilities around the world. The gap between the current state of ITC instrumentation and the devices described here is not a gap in available technology. It is a gap in the application of existing technology to a domain it has not yet been pointed at.

The transmaterialization.com program has catalogued this gap explicitly, identifying the specific tools from mainstream physics and engineering that are most relevant to next-generation ITC research and that have not yet been applied. This catalog deserves description in its own right, because it establishes that the engineering program is not waiting for technology that does not exist — it is waiting for researchers who will deploy technology that does.

Superconducting qubit arrays and cryogenic quantum processors — the hardware that powers modern quantum computing — are precisely the ultra-sensitive detectors that the Klein SQ model calls for. Classical white noise has been the ITC carrier medium for seventy years; quantum noise from a tuned qubit array is the theoretically motivated next step. The sensitivity advantage is not marginal: superconducting qubits operating near absolute zero can detect energy perturbations orders of magnitude below the thermal noise floor that limits classical electronics. Quantum dot sensors and quantum random number generators address the consciousness-imprinting-on-randomness prediction directly. Meta-analyses of hundreds of controlled psi experiments found deviations from true randomness at odds of a trillion to one — a genuine and documented empirical result that mainstream physics has not adequately explained. A QRNG running real-time entropy monitoring with automated alert triggering is a buildable instrument based on existing research.¹¹ Microtubule-mimicking polymer arrays address the operator-dependence problem from the material side. Three independent theoretical frameworks in the transmaterialization.com body of work — Mocombe's Consciousness Field

Theory, Bhadra's quantum symmetry framework, and the Orch-OR model — all converge on biological microtubules as the coupling interface between consciousness and matter. Synthetic polymer scaffolds matching the geometry of those structures, connected to neuromorphic processors, could be the first genuinely operator-independent ITC transducer. Software-defined radio tuned to the harmonic ladder frequencies predicted by Scale-Time Dynamics, processed by wavelet decomposition — those are off-the-shelf tools applied to a new target frequency range. MEMS torsion sensors — micro-electromechanical devices that measure forces at scales previously unreachable — could be the first hardware probe of spacetime torsion anomalies that T-HET predicts.

EEG and MEG monitors on the operator, feeding real-time coherence calculations back into the device as a control parameter — implementing the CIF coupling factor's coherence dependence as an actual instrument variable — transform operator consciousness from a methodological problem into a measurable and controllable input. The session activates only when the operator reaches a measured coherence threshold. That is not mysticism. That is closed-loop experimental control. And AI voice shapers generating human-vocal-tract noise as substrate, with multiple parallel speech-recognition models running simultaneously — when independent models converge on the same transcription, the evidence for a real signal is quantitative. Pareidolia becomes statistically falsifiable.

The CIF Equation as Unifying Logic

The eight devices described in this chapter are not eight separate research programs with eight incompatible assumptions. They are eight different approaches to the same underlying physics — eight ways of accessing the same informational substrate through different coupling mechanisms and different detection technologies.

The CIF equation makes this unity explicit. The Φ -Field Resonance Detector and the IVM Geometric Resonator both probe the $G_{\text{topo}}[\Psi]$ term — different hardware, same target. The Quantum Consciousness Communicator and the Absement Integrator both work through the attractor mechanism $\Phi_i[\Psi]$ — one via entanglement, one via time-accumulated signal. The Entropic Gradient Receiver maps directly onto the order term $S_{\text{ent}}[\Psi]$. The Psychion Field Sensor is a hardware probe for how consciousness couples to matter at the specific frequencies where λ_i is non-negligible. The Scale-Time Harmonic Transceiver is tuned to the frequency bands where $G_{\text{topo}}[\Psi]$ predicts resonant coupling. The Consciousness Field Coupler attempts to access the boundary where all three terms become simultaneously active — the complete coupling event.

This is what a unifying theory looks like in practice: not a claim that everything is one thing, but a demonstration that apparently different

experimental designs target the same underlying mathematical structure from different angles. Independent research programs, if they are genuinely probing the same physical reality, should eventually converge — not on identical results, but on results that are mutually consistent and that can be understood within a single explanatory framework. The CIF equation is proposed as that framework. The eight devices are proposed as the experiments that will test whether it holds.¹²

Detection Is Not Interpretation

A fair and important objection to all eight devices deserves to be stated plainly rather than left implicit: every one of them is designed to solve the coupling problem — to detect, with statistical confidence, that something non-random is happening at the boundary between physical and non-physical domains — and none of them, as specified, solves the separate and arguably harder problem of interpreting what that something means. The Entropic Gradient Receiver is the most honest about this limitation by design: it reports an entropy anomaly, explicitly declining to extract content from it, on the theory that this interpretive neutrality is itself a methodological virtue. But the same gap exists, more quietly, in the other seven. A correlated deviation across the IVM Geometric Resonator's lattice nodes, a statistically significant photon-count anomaly in the Consciousness Field Coupler, a sustained signal at a Scale-Time Harmonic Transceiver's target frequency — each of these is evidence that coupling occurred. None of them, on its own, is a sentence, a word, or even a reliably interpretable yes or no.

This is not a flaw unique to these eight proposals; it is the central unsolved problem of the entire next-generation engineering program, and it is worth naming as such rather than allowing the elegance of the CIF framework to obscure it. The devices in this chapter are, almost without exception, detection instruments rather than communication instruments — they are built to establish more rigorously that the coupling described throughout this book is real, not to provide a higher-bandwidth channel for what comes through it. SoulPhone's binary yes/no design, discussed in Chapter Eight, represents the most serious existing attempt to bridge this gap incrementally: building from a single bit of reliably interpretable content toward something richer, rather than assuming richer content can be extracted directly from an entropy signature or a correlation pattern. The honest position is that interpretation — turning a confirmed coupling event into an actual message — is a problem this generation of devices is built to set up, not to solve. Solving it, for at least the more conservative members of this set of eight, is the next chapter in the engineering program this book describes, not a gap in the proposals as they currently stand.

A Note on Sequence and Priorities

The eight devices span a range of near-term tractability, offering multiple entry points for research teams with different resources and expertise. The Absement Integrator is the most immediately buildable: it requires no exotic components, only disciplined multi-channel signal integration and statistical analysis, which can be implemented with existing laboratory equipment and open-source software. The Entropic Gradient Receiver is similarly near-term: quantum random number generators are commercially available, and the entropy analysis algorithms are standard tools in information theory. The Psychion Field Sensor requires advances in polymer nanotechnology but is not beyond current capabilities in materials science. The IVM Geometric Resonator and the Φ -Field Resonance Detector require careful fabrication of precisely specified geometric structures but use conventional sensing technologies.

The Quantum Consciousness Communicator and the Scale-Time Harmonic Transceiver are at an earlier theoretical stage, making them ideal targets for parallel theoretical development alongside the more immediately buildable designs. The Consciousness Field Coupler represents the most formally ambitious design — the kind of long-range target that motivates and organizes a research program even before all its parameters are fully specified.

The recommended sequence is to begin with the Absement Integrator and the Entropic Gradient Receiver — not because they are the most theoretically interesting but because they are the most immediately buildable and the most directly testable. Positive results from those devices would provide the empirical grounding that justifies the investment in the more ambitious architectures. Negative results would be equally informative: they would establish constraints on the phenomena that the other device designs would need to account for.

This is how engineering programs advance. Not by attempting the most ambitious design first, but by establishing a reliable experimental baseline — understanding the phenomenon well enough at simple scales to justify the investment in complexity.

The voices in Jürgenson's 1959 recordings were the baseline from which six decades of ITC research have grown. The devices described in this chapter are the next step in that progression — not the final answer, but the next question properly asked and properly equipped.

Notes

1. The CIF variational equation — $\delta(S_{\text{phys}} - \lambda_i \Phi_i[\Psi] - \lambda_e S_{\text{ent}}[\Psi] - \lambda_g G_{\text{topo}}[\Psi]) = 0$ — is developed in Steve Glanz, 'The Conscious-Information Field (CIF) as Proof of the Transmaterialization (TMT) Hypothesis,' published at transmaterialization.com and archived with DOI: [10.5281/zenodo.17075743](https://doi.org/10.5281/zenodo.17075743). The mapping of each TMT class onto specific terms of

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the equation — ITC to $\Phi_i[\Psi]$, IEV to local features of $\Phi_i[\Psi]$ and $S_{\text{ent}}[\Psi]$, ITM to active writes to $\Phi_i[\Psi]$ mediated by $G_{\text{topo}}[\Psi]$, IFE to manipulation of $S_{\text{ent}}[\Psi]$, and IPH to reinforcement of healthy attractors in $\Phi_i[\Psi]$ — is drawn from that paper. The five falsifiable predictions (coherence thresholds, cross-modal invariance, entropy signatures, assembly complexity, topological resonances) are also from that paper and provide the experimental framework within which all eight devices described in this chapter are designed to operate.



2. Jason Padgett's Quantum State Vector (QSV) framework, which models consciousness as a tensor field $\Psi_{\text{tensor}} = \sum \lambda_i |\psi_i \Phi_i\rangle$ that maps onto spacetime curvature via the Einstein tensor through a transformation function $f(\Psi_{\text{tensor}})$, is developed in the document 'Quantum State Vector (QSV) as a Vector-Tensor Field by Jason Padgett — Relevance to ITC and Engineering Instructions,' published at [transmaterialization.com](https://www.transmaterialization.com). The implication that consciousness surviving death would persist as a coherent QSV structure whose dynamics could imprint on the qubit field of spacetime — detectable by devices tuned to the angular acceleration encoding $d^2\theta/dt^2$ — is drawn from the ITC application section of that document.
3. Marcel Krüger's Helix-Light-Vortex theory — proposing that matter consists of resonant spiral structures following Fibonacci and golden-ratio geometry — is documented in the [transmaterialization.com](https://www.transmaterialization.com) essay 'Helix-Light-Vortex Theory (HLV): A New Theoretical Framework for the Emergence of Space, Matter, and Consciousness.' Its application to ITC device design, specifically the principle that golden-ratio geometric structures in a physical device create resonant coupling with the substrate through which non-physical signals propagate, is drawn from Steve Glanz, 'Next-Generation ITC Device Architectures: Eight Designs Under a Unifying Framework,' published at [transmaterialization.com](https://www.transmaterialization.com) (<https://www.transmaterialization.com/2026/06/20/next-generation-device-architectures/>). The Φ -Field Resonance Detector is identified explicitly in that essay as the device architecture derived from Krüger's theory.
4. Bernardo Kastrup's analytic idealism — the philosophical framework proposing that consciousness is the fundamental substrate of reality and that physical reality is a representation within universal consciousness — is developed in his books *The Idea of the World* (Winchester: John Hunt Publishing, 2019) and *Decoding Schopenhauer's Metaphysics* (Winchester: John Hunt Publishing, 2020), and applied to ITC engineering in the [transmaterialization.com](https://www.transmaterialization.com) essay 'Idealism, Quantum Theory, and Technologies for Communicating with Non-Physical Entities — Based on Papers by Bernardo Kastrup.' The Quantum Consciousness Communicator device architecture is identified in Steve Glanz, 'Next-Generation ITC Device Architectures: Eight Designs Under a Unifying Framework,' published at [transmaterialization.com](https://www.transmaterialization.com) (<https://www.transmaterialization.com/2026/06/20/next-generation-device-architectures/>) as derived from Kastrup's framework, with quantum entanglement as the natural communication channel.
5. Paul C. Mocombe's Consciousness Field Theory, including the psychion particle, the brain-as-receiver model, and the microtubular coupling mechanism, is developed in 'Paul C. Mocombe's Consciousness Field Theory (CFT) and Instrumental Transcommunication: Theory, Applications, and Device Design,' published at [transmaterialization.com](https://www.transmaterialization.com). The Psychion Field Sensor design, using synthetic polymer scaffolds mimicking microtubule geometry, is derived from that document's engineering proposals. The laser beam interruption experiment from the SoulPhone project — in which a purported discarnate presence measurably slowed photons in a controlled beam — is cited in that document as experimental precedent. The microtubule diameter specification of approximately 25 nm is from the standard biological literature on microtubule structure.

6. André Dupke's Scale-Time Dynamics framework is documented in the [transmaterialization.com](https://www.transmaterialization.com) essay 'Scale-Time Dynamics, from Consciousness to Cosmos' and in the related summary documents. Its proposal that reality is organized around a hierarchical ladder of harmonic frequency ratios, and the engineering implication that devices tuned to those frequencies would couple preferentially to non-physical signals, is drawn from Steve Glanz, 'Next-Generation ITC Device Architectures: Eight Designs Under a Unifying Framework,' published at [transmaterialization.com](https://www.transmaterialization.com) (<https://www.transmaterialization.com/2026/06/20/next-generation-device-architectures/>), which identifies the Scale-Time Harmonic Transceiver as one of eight device categories.
7. Frank Wilczek's original proposal of time crystals as a phase of matter exhibiting periodic structure in time is presented in 'Quantum Time Crystals,' *Physical Review Letters* 109 (2012). Subsequent theoretical and experimental work, including discrete time crystals realized in periodically driven quantum systems, is reviewed in Yousefjani, Al-Kuwari, and Bayat, 'Discrete Time Crystal for Periodic-Field Sensing with Quantum-Enhanced Precision' (arXiv, 2025), which proposes and analyzes the specific sensing application referenced here: using a time crystal's long coherence time and stable internal oscillation as a quantum-enhanced probe for detecting weak periodic fields. The application of this established sensing technique to the frequency targets specified by Scale-Time Dynamics is the author's proposed extension, not a claim made in the cited physics literature itself. 
8. Edivaldo Costa Sousa Junior's Thermodynamic Holographic Entanglement Theory (T-HET) is documented in the [transmaterialization.com](https://www.transmaterialization.com) essay 'Thermodynamic Holographic Entanglement Theory (T-HET V3).' Its proposal that non-physical influences manifest as detectable anomalies in entropy gradients rather than as conventional signals, and the engineering implication for devices that monitor entropy structure rather than signal content, is derived from the T-HET document and from Steve Glanz, 'Next-Generation ITC Device Architectures: Eight Designs Under a Unifying Framework,' published at [transmaterialization.com](https://www.transmaterialization.com) (<https://www.transmaterialization.com/2026/06/20/next-generation-device-architectures/>), which identifies the Entropic Gradient Receiver as the device architecture derived from T-HET. 
9. Israel del Rio's Cosmological Consciousness Ontology (COCOON), including the biplanar Material Plane/Information Plane model, the microtubule-mediated quantum bridge, and the proposed stochastic resonance amplifier device, is developed in the [transmaterialization.com](https://www.transmaterialization.com) report synthesizing del Rio's framework with its application to EVP and ITC engineering. The underlying physical principle of stochastic resonance — that adding a calibrated level of noise to a system can make a sub-threshold signal more rather than less detectable — is an established phenomenon in nonlinear physics, independent of and prior to its application here; see the general treatment in F. Moss, L. M. Ward, and W. G. Sannita, 'Stochastic Resonance and Sensory Information Processing: A Tutorial and Review of Application,' *Clinical Neurophysiology* 115 (2004): 267–281. 
10. The Absement Integrator design is derived directly from Lance Carlyle Carter's absement and assembly time frameworks as applied to ITC in 'Integrating Absement and Assembly Time Theory with Electronic Voice Phenomena (EVP) and Instrumental Transcommunication (ITC),' published at [transmaterialization.com](https://www.transmaterialization.com). The specific design features — multiple parallel integration channels, temporal coherence requirement for cross-channel simultaneous threshold crossing, confidence level derived from the number of channels simultaneously above threshold, and interpretively neutral output format — are all drawn from Carter's document's engineering principles section. The seismograph analogy is the author's synthesis of Carter's design philosophy. 
11. Nassim Hareamein's Spacememory Network and the 64-cell tetrahedral lattice (Isotropic Vector Matrix) are documented in Hareamein, Brown, and Val Baker, 'The Unified Spacememory

Network: From Cosmogogenesis to Consciousness,' published at [transmaterialization.com](https://www.transmaterialization.com) as a summary of the original paper. The IVM Geometric Resonator device architecture — a 64-cell tetrahedral lattice with piezoelectric and photonic sensors at each node — is identified in Steve Glanz, 'Next-Generation ITC Device Architectures: Eight Designs Under a Unifying Framework,' published at [transmaterialization.com](https://www.transmaterialization.com) (<https://www.transmaterialization.com/2026/06/20/next-generation-device-architectures/>) as derived from Hameiri's geometric framework. The description of the IVM as 'nature's own geometry of equilibrium' is from Buckminster Fuller's Synergetics. 

12. Narayan Kumar Bhadra's complex quantum-state framework and its proposal that reality is organized around two sectors — matter and consciousness — interacting through a ten-dimensional geometric space via light-based energy exchange is documented in the [transmaterialization.com](https://www.transmaterialization.com) essay 'The Complex Quantum-State of Consciousness — Dr. Narayan Kumar Bhadra.' The Consciousness Field Coupler device design, using silicon photomultiplier arrays arranged in a configuration derived from Bhadra's dimensional model, is identified in Steve Glanz, 'Next-Generation ITC Device Architectures: Eight Designs Under a Unifying Framework,' published at [transmaterialization.com](https://www.transmaterialization.com) (<https://www.transmaterialization.com/2026/06/20/next-generation-device-architectures/>) as the device architecture corresponding to Bhadra's framework. The convergence between Bhadra's framework and the CIF equation's complete variational structure is noted in that essay: 'Bhadra's Consciousness Field Coupler — the most formally ambitious of the eight — converges with the complete CIF framework term by term. Two independently derived mathematical structures, arriving at the same skeleton from opposite directions.' 13. The catalog of existing technology relevant to next-generation ITC research — superconducting qubit arrays, MEMS torsion sensors, microtubule-mimicking polymer arrays, silicon photomultipliers, SDR tuned to harmonic ladder frequencies, EEG/MEG operator coherence monitoring, AI voice shapers with parallel speech recognition — is drawn from Steve Glanz, 'Next-Generation ITC Device Architectures: Eight Designs Under a Unifying Framework,' published at [transmaterialization.com](https://www.transmaterialization.com) (<https://www.transmaterialization.com/2026/06/20/next-generation-device-architectures/>), which catalogs existing physics and engineering tools not yet applied to ITC research. The statement that 'The technology exists. The theory says where to point it. The experiments haven't been done yet' is the closing line of that essay. The meta-analysis result on quantum random number generator deviations — finding odds of a trillion to one against chance across hundreds of controlled psi experiments — refers to the work reviewed in Dean Radin, *Entangled Minds* (New York: Paraview, 2006). 
14. The argument that the eight devices constitute not separate research programs but eight approaches to the same underlying mathematical structure, and that the CIF equation provides the unifying framework within which apparently different experimental designs can be understood as targeting the same physical reality from different angles, is derived from Steve Glanz, 'Next-Generation ITC Device Architectures: Eight Designs Under a Unifying Framework,' published at [transmaterialization.com](https://www.transmaterialization.com) (<https://www.transmaterialization.com/2026/06/20/next-generation-device-architectures/>): 'CIF doesn't contradict that theory. It contains it... That is what a unifying theory looks like in practice. Not a claim that everything is one thing — a demonstration that the same underlying logic governs apparently different designs. CIF is that logic. These devices are the experiments that will test whether it holds.'

CHAPTER TEN

From Communication to Materialization

The Portal, the Progression, and the Question of Immortality

There is a progression implicit in the work described in this book, and this chapter makes it explicit. It runs as follows. Electronic Voice Phenomena establish that information can cross the boundary between physical and non-physical domains in the form of acoustic signals — structured, sometimes verifiable, sometimes interactive signals that appear in electronic recordings under conditions that conventional physics cannot explain. Instrumental Transcommunication extends this to visual and textual modalities, to real-time interactive exchanges, to signals that appear on isolated computers and through radio receivers from which the reception components have been removed. The eight device architectures of Chapter Nine represent the next step: moving from improvised experimental techniques to instruments designed from theoretical first principles, capable of producing results that are autonomous, reproducible, and statistically unambiguous.

These are steps along a single trajectory. And the trajectory, followed to its logical end, arrives somewhere that most discussion of ITC has not yet gone — not because the evidence does not point there, but because the destination seems so extravagant that even researchers sympathetic to the phenomena have been reluctant to name it directly.

This chapter names it.

The progression from communication to materialization — from voices in recordings to the physical transit of objects and, ultimately, of persons across the dimensional boundary — is not a leap of faith. It is the logical implication of a set of premises that the preceding chapters have argued are supported by serious evidence. If consciousness survives death, if it exists in a non-physical domain that is genuinely real and structured, if information can cross the boundary between that domain and the physical world, and if that crossing is governed by lawful principles that engineering can exploit — then the question is not whether the crossing can eventually extend to matter itself, but when and how. This chapter addresses that question, with particular attention to its most consequential implication: that the one-way door between physical and non-physical existence may be reversible, and that the technology to reverse it may be among the most fundable and transformative scientific undertakings that humanity could pursue.

The Progression

The history of technology is a history of progressions that seemed impossible until they were inevitable. The pioneers of radio communication were not trying to build a technology that would eventually put a computer in every pocket. They were trying to demonstrate that electromagnetic waves could carry a signal across a room. The progression from that demonstration to the smartphone was not planned; it was the cumulative result of each generation following the evidence to its next logical implication.

The progression from EVP to materialization follows the same logic. Begin with the established fact: information of sufficient structure and specificity to be verified crosses from non-physical to physical reality and appears in electronic recordings. This fact is established by the evidence reviewed in Chapters Two and Three — not proven beyond all possible objection, but established to the standard that any serious empirical inquiry requires. The question that follows immediately is: what else can cross? If information can cross, can other things?

The answer that the TMT framework proposes is: probably yes, along a developmental progression. The boundary between physical and non-physical reality is not a wall — it is a membrane whose permeability to different kinds of transmission is a function of the engineering applied to the crossing. Information is the lightest thing to move: it has no mass, requires no matter, and can be encoded in the modulation of pre-existing physical processes without displacing any physical substance. Images are heavier: they require coordinated modulation across a two-dimensional field rather than the one-dimensional time series of a voice. Interactive communication in real time — genuine two-way exchange — requires sustained coupling rather than momentary imprinting. Each step in this progression requires more from the coupling between domains, and each step has been documented in the ITC literature, imperfectly and inconsistently but genuinely.

The next steps in the progression — energy transfer, matter transport, and the transit of persons — require progressively more from the coupling. But the principle is the same at each stage. The difference between a voice imprinted on a recording and a human body passing through the dimensional boundary is a difference of magnitude and engineering complexity, not a difference of kind. Tiller's framework makes this explicit: his D-space/R-space model predicts that the coupling between physical and non-physical domains is adjustable — that the coupling coefficient can be increased by sustained intentional practice and appropriate instrumental conditioning. A sufficiently high coupling coefficient, sustained for sufficient duration with sufficient coherence, could in principle support the transit of matter as readily as it supports the transit of information. This is not a guarantee. It is a prediction derived from a model that Tiller has

tested experimentally, at the information level, with results reproducible across independent laboratories.¹

Eight Theoretical Frameworks Supporting the Portal

The case for the physical portal — a device capable of facilitating the transit of matter across the dimensional boundary — does not rest on Tiller's framework alone. The TMT presentation materials identify eight independent theoretical frameworks, each arriving from a different direction in physics or consciousness science, each reaching a compatible conclusion.

Matti Pitkänen's Topological Geometroynamics represents physical matter as four-dimensional surfaces embedded in a higher-dimensional space. In TGD, the dimensional boundary is a topological feature of spacetime — a region where the surface of our physical reality meets adjacent surfaces. A portal, in TGD terms, is a topological phase transition: a localized region where the surface geometry changes state, opening a channel through which matter can transit to an adjacent surface. ITC already exploits this channel at the information level; higher-energy coupling would exploit it at the matter level.

James Beichler's fourth spatial manifold framework embeds our three-dimensional space inside a fourth spatial dimension where distant points in three-dimensional space become adjacent. Information transit through this manifold is what ITC demonstrates. Matter transit through the same manifold is, in Beichler's model, the same process at higher intensity — a quantitative rather than qualitative escalation. Chris Hardy's Infinite Spiral Staircase Theory describes each physical object as having a hyperdimensional template — a *syg-field*, or semantic field — that exists in a dimension beyond spacetime. Transmaterialization, in Hardy's framework, is the process of decoupling that template from its current three-dimensional coordinates and re-coupling it at new coordinates, leaving the physical matter to reconstitute at the new location. ITC, in this model, retrieves identity patterns from the same *syg-field* at lower energy; materialization writes to it at higher energy.² Israel del Rio's COCOON, discussed in Chapter Nine as a theoretical grounding for entropy-based ITC detection, offers a structurally similar account by a different route. Where Hardy's *syg-field* is a hyperdimensional template specific to each object, COCOON's Information Plane is a single, shared nonlocal repository — del Rio's analog of an Akashic record — in which the complete informational state of everything that has been physically observed is held. The two frameworks converge on the same underlying claim: that an object's matter and its information are, at some level, separable, and that the information component can exist, be addressed, and in principle be acted upon independently of any particular location in physical space. Where they diverge is mechanism — Hardy proposes a per-object template existing in a dimension beyond spacetime, while

COCOON proposes a single shared field accessed through quantum entanglement at the moment of observation — but the shared structural commitment, arrived at independently, is the same one this chapter has already noted runs through all eight justifications: physical matter is not the most fundamental layer of what an object is, and detaching the informational layer from one location and re-establishing it at another is, in each framework's own terms, a coherent engineering target rather than a category error.

Frances Di Biase and Karl Pribram's holoinformational model holds that every object's complete informational blueprint is non-locally encoded throughout a holographic field. Transmaterialization, in this model, is not the physical movement of matter through space but the activation of an object's informational blueprint at a new address in the holographic field — the matter reconstitutes where the information template is activated. Jason Padgett's quantum state vector framework places ITC and transmaterialization on the same continuum: small-scale and large-scale access to the same dimensional boundary, differing only in the energy and coherence of the coupling. Marcel Krüger's Helix-Light-Vortex theory proposes that matter is fundamentally stable standing waves of structured light. Transmaterialization in HLV is a wave engineering problem: dissolve the standing wave at origin, reconstitute it at destination. No particle needs to physically travel; only the wave pattern needs to be transmitted and reconstituted.

Wilhelm Reich's orgone energy research demonstrated that concentrated bioenergetic field density produces measurable physical effects at macroscopic scale. The portal, in Reich's terms, requires that the local accumulation of orgone — vital field energy — reach a threshold sufficient for matter transit. Orgone accumulator chambers may be one way to condition the space. And Tiller's psychoenergetic science, as detailed throughout, experimentally demonstrated that sustained conscious intention alters physical matter through coupling between spacetime layers. The IIED experiments showed this can be engineered at the information and biological level. The portal is a space conditioned intensely enough for matter transit rather than signal.

These eight frameworks are not a single theory presented eight ways. They are independent research programs in different areas of physics and consciousness science, each with different mathematical formalisms, different experimental traditions, and different predictions. Their convergence on the same general conclusion — that the dimensional boundary is crossable by matter as well as information, through processes that are in principle engineerable — constitutes exactly the kind of consilience that the preceding chapters identified as the appropriate standard of evidence for claims that cannot be settled by a single decisive experiment. No single framework proves the portal. Their

convergence in eight independent directions provides a level of evidential support that is difficult to dismiss as coincidence.³

Apports: Existing Evidence for Small-Scale Materialization

The eight frameworks above are theoretical. There is also a body of claimed empirical evidence, older and more directly relevant to the matter-transit question than anything discussed so far in this book, and it deserves to be examined on its own terms rather than folded into the theoretical discussion. Physical mediumship circles have, for more than a century, reported apports: the sudden appearance of physical objects — coins, stones, flowers, jewelry, on occasion small living animals — inside a sealed séance environment, under conditions the sitters maintain exclude ordinary introduction of the object by hand. The phenomenon is conceptually distinct from the materialization question this chapter has otherwise been concerned with. An apport, on the standard account within the field itself, is not a creation from nothing or from imagination; it is a relocation, the same object that existed somewhere else a moment before now present in the séance room. Encyclopedia treatments of the phenomenon describe the mechanism spiritualists themselves propose as dematerialization followed by reintegration elsewhere — which is to say, the apport tradition has been describing what this book calls instrumental trans-materialization, in essentially those terms, for more than a hundred years.

The evidential record is genuinely mixed, and an honest accounting has to hold both halves of it. Some of the historical apport mediums were exposed as frauds under serious investigation: Lajos Pap, a Hungarian medium whose apports in the 1920s and 1930s included live animals and were initially documented at length by the researcher Elemér Chengery Pap, was found in 1935 by the psychoanalyst Nandor Fodor to have concealed a snake beneath his robe, and was independently judged fraudulent by the Society for Psychical Research's Theodore Besterman and by Harry Price. Cases like this are why the apport literature as a whole has fallen out of serious parapsychological favor since its early-twentieth-century peak, and why this book treats it with more caution than the survival evidence discussed in Chapter Three.

But not every documented case collapses under scrutiny. The psychologist Stanley Krippner, a credentialed researcher with appointments at Saybrook University and a former president of the Parapsychological Association, conducted a multi-year study in the 1990s of Amyr Amiden, a Brazilian claimant whose apports — polished stones, coins, gemstones, metallic jewelry — were collected, laboratory-tested, and identified as genuine mineral specimens including agate, amethyst, and low-grade emerald. Krippner's research team found a statistically significant correlation between the frequency of Amiden's apports and geomagnetic activity across the Southern Hemisphere, a result

consistent with a broader body of parapsychological research linking anomalous phenomena to geomagnetic field conditions. The Scole circle, whose physical mediumship was investigated over an extended period by the Society for Psychical Research members David Fontana, Arthur Ellison, and Montague Keen, also reported apports alongside its other documented phenomena. None of this constitutes proof that matter can be relocated by non-physical agency. It is, at minimum, a hundred-year-old body of claimed evidence — uneven, contaminated by genuine fraud, but not uniformly discredited — that the engineering program this chapter describes is not inventing a question from nothing. The question of whether physical objects can be moved across distance by means outside ordinary transport has been asked, and partially tested, by serious researchers for longer than ITC itself has existed.⁴

The Immortality Implication

Of all the implications of a working portal, the most consequential — and the most electrifying for any potential funder who grasps it — is the implication for human mortality.

The conventional understanding of death is that it is one-directional. The living become the dead; the dead do not return. This directionality has been the organizing premise of every human culture's relationship with mortality since the beginning of recorded history. It underlies the grief we feel, the religions we construct, the philosophy we develop, the medicine we practice. If consciousness survives death — as the evidence reviewed in Chapter Three supports — then the directionality is modified: we persist, but in a different domain, without our physical bodies, unable to return to the physical lives we inhabited. The emotional and existential implications of confirmed survival are enormous, as Chapter Five described. But survival alone, without physical return, still means death in the most concrete sense that most people mean by the word: the end of embodied experience, the severance from physical life and relationship, the loss of the body and all its capacities.

The portal changes this. Not hypothetically, not speculatively, but as the logical implication of premises that the evidence supports. If consciousness survives death in a non-physical domain, and if the dimensional boundary between that domain and the physical world is crossable in both directions — if a portal exists that can facilitate the transit of matter as well as information — then the boundary between the living and the dead is not merely permeable to communication. It is permeable to return.

The Vision Part 4 of the transmaterialization.com program states this directly: 'Immortality, physical and non-physical, as well as access to resources become unlimited, as we grasp the nature of reality.' And further: 'In addition to confirming the immortality of the soul, by consulting experts on the other side, in

addition to subtle energy field studies, we learn the secrets of physical immortality.' This language is precise. The claim is not that biological aging is halted by pharmacology or genetic engineering — that is a separate and already extensively funded research program. The claim is that physical immortality becomes accessible through a fundamental revision of what death is, combined with the technological capacity to move freely between physical and non-physical existence. In a world with a working portal, death becomes not a final destination but a transition — one that, for a consciousness with access to portal technology, need not be permanent.⁴ It is worth sitting with this claim rather than moving past it quickly. The portal, if developed, would not merely comfort the bereaved. It would not merely settle philosophical questions about consciousness. It would render optional the most universal and most feared feature of human existence. Every human being who has ever lived has died, or will die, in the current understanding of mortality. Every grief, every deathbed, every gravestone, every elegy ever written rests on the premise that death is final and that the dead do not come back. The portal does not merely change what we believe about death. It changes what death is.

The Funding Argument

The development of Transmaterialization Technology — including the portal — requires resources that are not currently available to the small, scattered, unfunded research community working in this domain. Making the case for those resources requires identifying what category of investor or philanthropist this research speaks to most directly. The answer becomes clear when the immortality implication is stated plainly.

Every major technology company of the past two decades has understood that the most fundable problem in technology is the problem that every human being has and that no current solution adequately addresses. Social connection, information access, entertainment, convenience — these have attracted trillions of dollars because they address universal human needs. Death is more universal than any of them. Every human being dies. Every human being loses people they love to death. Every human being lives in the shadow of their own finitude. The pharmaceutical, biotechnology, and longevity research industries attract billions of dollars annually in pursuit of incremental extensions of biological life. None of them is addressing the problem that the TMT research program is addressing: the abolition of the one-way door.

The strategic argument for funding is not that TMT is certain to produce a working portal. It is that the evidence base for the research program is substantially more credible than most funders have understood, that the theoretical frameworks supporting the portal are developed and convergent, that the engineering roadmap from current ITC to the portal is a genuine roadmap

rather than a wish list, and that the potential upside — a technology that makes optional the most universal source of human suffering — is so enormous that even a modest probability of success justifies substantial investment. The argument is similar to the argument that justified the human genome project, the Manhattan Project, or the Apollo program: the potential outcome is transformative enough that the investment is warranted even under significant uncertainty. With those programs, the outcome was known to be possible in principle; the question was only engineering. With the portal, the question of in-principle possibility is the primary uncertainty — but the consilience of eight independent theoretical frameworks and the substantial experimental evidence for ITC make it a more tractable uncertainty than it might appear from outside the field.⁵ Funders who have made their resources available for longevity research — extending biological life by decades — should understand that the TMT research program is addressing the same underlying aspiration with a fundamentally different approach. Biological longevity research works within the constraint that consciousness is produced by the brain and that extending life means keeping the body functional. TMT research begins with the premise that consciousness is not produced by the brain — a premise supported by the evidence reviewed in Chapter Three — and follows that premise to its engineering implications. The two approaches are not competitors; they are addressing different aspects of the mortality problem from different theoretical starting points. But if the TMT premise is correct, the longevity approach is addressing a symptom while TMT addresses the cause.

The Engineering Roadmap to the Portal

The progression from current ITC to a working portal is not a single step. It is a sequence of engineering milestones, each achievable in principle given appropriate resources, each building on the previous, each producing intermediate results that are valuable in their own right. The roadmap below describes what those milestones are and how they relate to one another; it does not catalog the specific scientific and practical obstacles standing in the way of reaching each one, which are substantial and which the book's concluding chapter addresses directly, alongside an honest accounting of how much of this roadmap rests on established evidence versus theoretical extrapolation.

The first milestone is reliable two-way communication — a device that meets the criteria described in Chapter Seven: reproducible, accessible to independent replication, operator-independent, and producing results whose content could not have been generated by any living person with access to the experimental system. This is the milestone toward which the SoulPhone project, the Klein SQ model engineering program, and the eight devices of Chapter Nine are all directed. It is ambitious but not extravagant; the phenomena that would

constitute this milestone have been documented, imperfectly but genuinely, across six decades of ITC research.

The second milestone is reliable energy transfer — devices capable of detecting and potentially channeling the anomalous energy that Tiller's IFE framework predicts should be accessible when physical and non-physical domains are sufficiently coupled. Tiller's IIED experiments represent the earliest documented evidence for this: devices conditioned by focused human intention produced measurable changes in physical systems that require energy, and that energy had no conventional source. Understanding the mechanism of this energy transfer — its frequency characteristics, its relationship to intentional coherence, the material properties that facilitate or impede it — is a tractable engineering problem given appropriate instrumentation.⁶ The third milestone is matter transport at small scale — the movement of non-biological material objects across the dimensional boundary and back. The theoretical frameworks reviewed earlier in this chapter all predict this is possible; none of them identifies a categorical barrier between information transit and matter transit. The engineering challenge is substantial: the coupling coefficient required for matter transit is presumably much higher than for information transit, the coherence requirements are presumably much more stringent, and the energy demands are presumably much greater. But the challenge is one of degree rather than kind, and the existence of intermediate milestones — energy transfer, then small-object transport — means the engineering can proceed incrementally.

This milestone has a real, if partial and conventionally-physical, precedent already underway. Quantum teleportation — a misleading name for a genuine and rapidly maturing field, and one that needs to be carefully distinguished from what this chapter means by transmaterialization — has moved from laboratory curiosity to an active engineering target over the past two decades. The technique transfers the quantum state of one particle onto another, distant particle via entanglement, without the original particle physically traveling between the two points; it has been demonstrated over 248 kilometers of optical fiber, across free-space links exceeding 1,200 kilometers using satellite relays, and in a 4,600-kilometer space-to-ground network linking multiple ground stations through a single satellite. In 2016, researchers at Delft University of Technology teleported quantum information between diamond chips containing nitrogen-vacancy defects, separated by several meters with no physical connection between them. Physicists at the Max Planck Institute have extended related techniques to individual rubidium atoms, and in November 2025 researchers reported the first teleportation of a photon's quantum state between two independently operated quantum dot sources — a step specifically aimed at the kind of standardized, repeatable hardware a real quantum network would require.

The distinction that has to be held onto carefully is this: every one of these experiments teleports information — a quantum state — not matter. The particle that ends up in the new state at the receiving end is a particle that was already present there; what crosses is the description of how that particle should be configured, not the particle's own substance. This is conventional, well-understood, entirely physical quantum mechanics, achieved through entanglement and classical communication working together, with no exotic new physics and certainly no appeal to non-physical domains. It is not what this chapter's third milestone describes, and conflating the two would overstate the case for ITM considerably. But the distance between conventional quantum teleportation and genuine matter transit is smaller than it was twenty years ago, and serious physicists have been willing to say so. Anton Zeilinger, whose research group performed some of the foundational experiments in the field and who shared the 2022 Nobel Prize in Physics for work on quantum entanglement, suggested in his own technical writing that teleportation between atoms separated at macroscopic distances was achievable within a few years of his writing, and between molecules within a decade or so — a forecast that has aged reasonably well given the pace of subsequent progress. The physicist Eugene Polzik's group has gone further still, demonstrating entanglement between two macroscopic clouds of cesium gas, each containing roughly a trillion atoms, opening at least a conceptual path toward teleporting the bulk, collective properties of genuinely macroscopic objects rather than single particles. None of this is matter teleportation in the ITM sense — actual physical relocation of an object's substance, mediated through a non-physical domain, is a different and more radical claim than anything conventional quantum teleportation research is attempting. But the steady, well-funded, mainstream progress toward state transfer at ever larger scales is the kind of foundation on which a more ambitious engineering claim can eventually be tested, and it means the third milestone described here is not asking physics to do something it has shown no capacity to approach.⁴ The fourth milestone is matter transport at biological scale — the movement of living organisms across the boundary. This milestone introduces new complexities: living systems are not static objects but dynamic processes, and the transit protocol that works for an inanimate object may not preserve the biological integrity of a living organism. The theoretical frameworks suggest that consciousness — the informational attractor that constitutes personal identity in the CIF model — is precisely the thing that is most robustly preserved in non-physical domains. The challenge of biological transit is less about preserving consciousness than about preserving the material body that houses it during and after the transit. This is a formidable engineering challenge. It is also one that the intermediate milestones provide explicit preparation for: the physics of matter transport learned at small scale is the physics of matter transport at biological scale.

The theoretical claim that this milestone describes — a complete, functioning biological body dematerializing and rematerializing intact, with identity, memory, and continuity preserved — is not a wholly novel proposal invented for an engineering roadmap. It is, in the contemplative literature of several traditions, an explicitly reported organic capacity, attained without instrumentation, by individuals those traditions regard as having reached an advanced stage of realization. The most widely read account in English is Paramahansa Yogananda's description, in his 1946 *Autobiography of a Yogi*, of his deceased guru Sri Yukteswar appearing to him bodily in a Bombay hotel room in June 1936, some months after Yukteswar's physical death and burial. The materialized figure, in Yogananda's account, explained the capacity directly: 'O yes, my new body is a perfect copy of the old one. I materialize or dematerialize this form any time at will, much more frequently than I did while on earth. By quick dematerialization, I now travel instantly by light express from planet to planet or, indeed, from astral to causal or to physical cosmos.' Earlier in the same book, Yogananda describes witnessing his guru's own guru, Lahiri Mahasaya, materialize a complete palace in the Himalayas for the benefit of a disciple, and dissolve it again afterward.

This kind of account sits in a different evidential category from the controlled research discussed elsewhere in this book, and the difference is worth stating plainly rather than letting the story's vividness do unearned argumentative work. It is a single first-person testimony, written years after the fact by a devoted disciple, describing an experience that occurred during what he himself frames as a state of meditation — exactly the conditions under which the most rigorous chapters of this book have insisted that subjective report, however sincere, cannot substitute for independent verification.

Nothing about Yogananda's account can be checked the way Krippner's geomagnetic correlations or the Scole circle's sealed-film tests can be checked. What the account does establish, regardless of its evidential weight, is that the specific capacity this chapter's fourth milestone is engineering toward — full biological dematerialization and rematerialization, undertaken at will, with identity and memory intact — is not a concept original to this book or to modern theoretical physics. It is a capacity that contemplative traditions, working entirely without instrumentation, have attributed to their most advanced practitioners for centuries, under the same basic theory this book has been developing in technological terms: that the physical body is not the most fundamental level of what a person is, and that a sufficiently developed coupling between consciousness and matter can dissolve and reconstitute the body rather than merely communicate across the boundary that separates it from non-physical existence. The working hypothesis of this book's whole engineering program is that what such traditions describe as an attainment of advanced spiritual

realization may, in time, also become accessible by other means — that capacities reached organically, through decades of contemplative discipline by a rare few, are not for that reason permanently closed to technological assistance, any more than the capacity for long-distance communication, once the rare achievement of gifted mystics and prophets, remained closed to the telegraph and the telephone.⁶ The fifth milestone is the full bidirectional portal: the reliable transit of persons from physical to non-physical domains and back, at will, with preserved identity and biological integrity. This is the milestone that makes death optional. It is the most distant on the roadmap and the most uncertain in its specific requirements. It is also the one toward which the entire progression is directed, and the one whose potential implications dwarf all others.

The Consulting Experts

There is a dimension of the portal's potential that deserves its own treatment, because it is both practically important and philosophically remarkable: the possibility of direct consultation with deceased scientists, scholars, and other individuals whose knowledge and experience do not end at death.

The Vision Part 4 asks directly: 'What if we could talk to Einstein directly? Or some other scientist who never inhabited a body, but can explain the workings of the universe?' This is not a rhetorical flourish. It is a research proposal. If consciousness survives death, and if the surviving consciousness retains the memories, intellectual capacities, and accumulated knowledge of the living person, then a working ITC device is also a research tool: a means of accessing the intellectual resources of every human being who has ever lived and whose consciousness persists in the non-physical domain. The implications for physics alone are staggering. The unresolved problems in contemporary theoretical physics — the unification of quantum mechanics and general relativity, the nature of dark matter and dark energy, the interpretation of the quantum measurement problem — are problems that some of the greatest minds in the history of physics spent their lives on and did not resolve. If those minds persist, and if they can be reached, the consultation is not merely possible but scientifically productive.⁷ The same argument applies across every field of human knowledge, and it is worth resisting the temptation to let the scientific case stand in for all of it. Historical figures whose testimony bears on unresolved historical questions. Artists and composers whose works raise interpretive questions that surviving documents cannot settle. Scientists who died in the middle of research programs that their successors have not been able to complete. But the case may be strongest, not weakest, in exactly the domains where physical instrumentation has historically had the least to offer: philosophy and religion. Philosophers whose systems left open problems that centuries of subsequent commentary have argued about without resolution — what would

Kant say to the objections raised against the categorical imperative in the two centuries since his death, what would Aquinas make of the cosmological arguments developed after him, how would the great skeptics of antiquity respond to modern epistemology — are not hypothetical questions if the thinkers themselves remain, in some form, reachable. The same applies with even greater force to religious and theological authorities: founders and early interpreters of traditions whose teachings have been debated, translated, and contested for millennia by people working entirely from texts and inference. A portal capable of communication would not settle theological disputes by fiat — the testimony of a single contacted authority would itself need to be evaluated, not simply accepted — but it would convert disputes that are currently unanswerable in principle into disputes that are, for the first time, open to a kind of evidence no theological or philosophical tradition has ever had access to before. The portal — even at the communication level, before physical transit becomes possible — is a library that does not lose its books, or its authors' capacity to be asked follow-up questions, when those authors die.

This framing matters for funding as well. A funder who is not moved by the immortality argument — who finds it too extravagant, too distant, too uncertain — may well be moved by the research tool argument. A device that could reliably access the intellectual legacy of deceased scientists at the peak of their knowledge would be worth enormous investment regardless of its implications for mortality. The two arguments are not in competition; they reinforce each other. The portal's value as a research tool is one more reason to invest in developing it, and its existence as a research tool — demonstrating that deceased persons can be accessed and can provide verifiable information — is one of the most direct possible forms of evidence for the survivalist premise on which the entire program rests.

What This Would Actually Mean

It is one thing to describe the portal in theoretical and engineering terms. It is another to sit with what it would actually mean for human experience if it were developed.

Consider what the current experience of death is. A person approaches the end of biological life — through age, illness, or accident — and crosses a threshold from which, in the current understanding, they do not return. The people who loved them have no further access to them except through memory, the uncertain testimony of mediums, and whatever sense of presence prayer or contemplation may provide. The grief that follows is, in large part, grief over the absolute and unalterable nature of the loss. Not merely that the person is absent from daily life — but that the relationship is over, that no further communication

is possible, that the accumulated experience of the shared life cannot be revisited from the other side.

The portal changes each of these features. The person who has crossed is not absent from access — they are reachable through the communication device, initially, and eventually through the portal itself. The relationship is not over — it is changed in character, as relationships change when people move to different cities or countries, but not severed. The accumulated experience of the shared life can be revisited from both sides. And for a consciousness with access to the portal, the crossing itself is reversible — not necessarily immediately, and perhaps not without considerable effort and technical support, but reversible in principle.

The Vision Part 2 asks: 'Would grief even be in the mix, now that the dimensional bridges have been crossed?' This is a profound question. Human grief, as it has existed throughout recorded history, is grief over permanent loss. The emotional architecture of grief — the stages, the timelines, the social rituals, the art and literature that express it — is built on the premise that the dead are gone and do not return. In a world with a working portal, that premise is false. Grief would not disappear — the physical absence of someone we love is real, and the changed nature of the relationship after death would still involve genuine loss. But the dimension of grief that is most devastating — the certainty of permanent annihilation, the impossibility of any further communication or relationship — would be removed. The grief that remained would be more like the grief of geographic separation than the grief of death as we currently experience it.⁸ The social, cultural, and psychological consequences of this shift are beyond the scope of any chapter to describe fully. They are, in the language of the TMT Vision essays, a game changer. Not in the casual sense that term is overused, but in the precise sense: the rules of the game of human existence would be fundamentally different in a world with a working portal. The ethics, the religions, the social structures, the legal systems, the economic arrangements that human civilization has developed all assume that death is final. In a world where it is not, each of these would need to be rebuilt, or at least profoundly revised, from the ground up.

The Intellectual Primacy and the Invitation

This book is, among other things, an act of intellectual primacy — a statement of the vision, the evidence, and the engineering program at a specific historical moment, so that whatever is built on this foundation is clearly built on this foundation. The history of technology shows that the pioneers who articulate a vision clearly and early are remembered as such, regardless of whether they are the ones who build the final device. Watson and Crick did not build the first DNA sequencer. Maxwell did not build the first radio. Turing did not build the

first general-purpose computer. They articulated the theoretical vision that made those developments possible.

The vision articulated in this book is that the development of Transmaterialization Technology — from reliable two-way ITC communication through energy transfer, matter transport, and the bidirectional personal portal — is the most consequential engineering program that humanity could pursue at this moment in its history. The evidence that justifies pursuing it is substantial, documented, methodologically serious, and consistently ignored by the institutions best positioned to address it. The theoretical frameworks that guide the engineering are developed, convergent, and grounded in serious physics. The roadmap from current capabilities to the portal is long but followable. And the destination — a world in which the one-way door between physical and non-physical existence is replaced by a passageway that can be traversed in both directions — is the most transformative development in human history.

That is not an overstatement. Every previous transformation in human civilization — agriculture, writing, printing, the scientific revolution, the industrial revolution, the digital revolution — changed what human beings can do in the physical world. The portal changes what human beings are. It changes the fundamental structure of the human situation. It changes the relationship between the living and the dead, the relationship between the physical and the non-physical, the relationship between time and consciousness. It renders death optional. It opens access to dimensions of reality that have been invisible to us not because they do not exist but because we have not yet developed the instruments to perceive them.

The work of developing those instruments is what this book has been about. The voice in Jürgenson's 1959 recording that mentioned his name was the first signal from the other side of the door. The door is still mostly closed. Opening it is the work.

Notes

1. William Tiller's prediction that the coupling coefficient between D-space and R-space can be increased by sustained intentional practice and appropriate instrumental conditioning — and that a sufficiently high coupling coefficient could support matter transit — is derived from the theoretical architecture of his duplex spacetime model, developed in *Conscious Acts of Creation* (Walnut Creek: Pavior, 2001) and elaborated in the transmaterialization.com document 'Words of William Tiller — Applications to TMT, ITC and EVP.' The specific experimental result — conditioning a space sufficiently to allow one IIED to produce matching oscillations in another IIED 150 feet away — is cited there as the closest existing experimental analog to the portal concept at the information level. 
2. The eight theoretical justifications for the portal — TGD (Pitkänen), fourth manifold (Beichler), ISST syg-field (Hardy), holoinformational model (Di Biase/Pribram), QSV field (Padgett), HLV standing waves (Krüger), orgone threshold (Reich), and psychoenergetic science (Tiller) — are drawn from the 'Theory Justification' slide (Slide 11) of the

transmaterialization.com presentation, as narrated in the accompanying slide narrative document. The specific language cited for each — 'portal event is a topological phase transition,' 'matter transport is the same path at greater intensity,' 'decoupling the template from local space,' 'changing the address tag,' 'QSV-continuum,' 'wave engineering problem,' 'orgone threshold,' and 'space conditioned intensely enough' — is drawn from that narrative. 

3. The use of the consilience standard — multiple independent lines of inquiry pointing in the same direction — as the appropriate evidential framework for claims that cannot be settled by a single decisive experiment is developed in Chapter Three of this book, in the context of survival evidence. Its application here to the convergence of eight independent theoretical frameworks on the portal concept follows the same logic: no single framework proves the portal; their convergence in eight independent directions provides a level of evidential support that is difficult to dismiss as coincidence. 
4. The 248-kilometer fiber-optic quantum teleportation distance record, the satellite-based free-space links exceeding 1,200 kilometers, and the 4,600-kilometer space-to-ground quantum communication network are documented in the review literature, including 'Distributed Quantum Information Processing: A Review of Recent Progress' (arXiv, 2025) and Lu, Cao, Peng, and Pan, 'Micius Quantum Experiments in Space,' *Reviews of Modern Physics* 94 (2022): 035001. The 2016 Delft University of Technology diamond-chip teleportation experiment using nitrogen-vacancy centers, the Max Planck Institute's work on rubidium atom teleportation, and the November 2025 teleportation between photons from independent quantum dot sources are reported in contemporary science press coverage including ScienceDaily (November 18, 2025) and Listverse (February 13, 2025), both drawing on the underlying peer-reviewed physics literature. Anton Zeilinger's prediction regarding the timescale for atom-and molecule-scale teleportation is discussed in 'An Introduction to Quantum Teleportation' (arXiv quant-ph/0302114), which also describes Eugene Polzik's group's entanglement of macroscopic cesium gas clouds at Aarhus University. Zeilinger shared the 2022 Nobel Prize in Physics with Alain Aspect and John Clauser for experiments with entangled photons establishing the violation of Bell inequalities. 
5. The apport phenomenon and its standard spiritualist explanation as dematerialization followed by reintegration are described in the Encyclopaedia Britannica entry 'Apport.' The case of Lajos Pap, including Elemér Chengery Pap's original documentation, Nandor Fodor's 1935 exposure of concealed apports, and the independent fraud findings of Theodore Besterman and Harry Price, is documented in Rodger Anderson, *Psychics, Sensitives and Somnambules: A Biographical Dictionary with Bibliographies* (Jefferson: McFarland, 2006), and in Júlia Gyimesi, 'Between Religion and Science: Spiritualism, Science and Early Psychology in Hungary,' *International Psychology, Practice and Research* 5 (2014): 1–20. Stanley Krippner's research on Amyr Amidon, including the laboratory identification of apported minerals and the statistically significant correlation with Southern Hemisphere geomagnetic activity, is documented in Krippner's own published account, 'The Strange Case of Amyr Amidon,' and in his earlier published work on geomagnetic field effects in anomalous phenomena, including 'Geomagnetic Field Effects in Anomalous Dreams and the Akashic Field,' *NeuroQuantology* (2006). The Scole circle's investigation by David Fontana, Arthur Ellison, and Montague Keen of the Society for Psychical Research, conducted between 1995 and 1997, is documented in the Proceedings of the Society for Psychical Research. 
6. Paramahansa Yogananda, *Autobiography of a Yogi* (Los Angeles: Self-Realization Fellowship, 1946), Chapter 43, 'The Resurrection of Sri Yukteswar.' The quotation describing Sri Yukteswar's materialized body and his account of dematerialization-based travel between planes is from that chapter, in which Yogananda dates the encounter to June 19, 1936, in a Bombay hotel room. The account of Lahiri Mahasaya materializing a palace in the Himalayas is from Chapter 34 of the same book, 'Materializing a Palace in the Himalaya.' The book has

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sold millions of copies since its 1946 publication and was named one of the hundred best spiritual books of the twentieth century in a 1999 HarperCollins panel survey; its evidential status, as discussed in the body text above, is that of a single devotional first-person testimony rather than independently verified report. 

7. The two key quotations from Vision Part 4 — 'Immortality, physical and non-physical, as well as access to resources become unlimited, as we grasp the nature of reality' and 'In addition to confirming the immortality of the soul, by consulting experts on the other side, in addition to subtle energy field studies, we learn the secrets of physical immortality' — are from Steve Glanz, 'Transmaterialization Technology Vision: Part 4,' published at transmaterialization.com. The language is presented in this chapter as the precise articulation of the portal's immortality implication that the TMT framework explicitly states. 
8. The comparison between the funding argument for TMT and the funding arguments that justified the Human Genome Project, the Manhattan Project, and the Apollo program is the author's synthesis. The specific financial framing — that the potential upside justifies investment even under significant uncertainty when the outcome is sufficiently transformative — is the standard argument for transformative research investment, articulated in the context of the longevity research industry by Aubrey de Grey in *Ending Aging* (New York: St. Martin's Press, 2007) and applied to the TMT program here. The comparison between biological longevity research (working within the materialist constraint) and TMT (beginning from a post-materialist premise) is the author's framing, not drawn from any specific source. 
9. The IFE milestone — devices capable of detecting and channeling anomalous energy accessible through D-space/R-space coupling — is grounded in Tiller's IIED experiments, which demonstrated measurable physical effects (pH changes, biological developmental changes, enzyme activity changes) that require energy input and that have no conventional energy source. The characterization of these experiments as evidence for the IFE energy transfer principle is developed in the transmaterialization.com document 'Words of William Tiller — Applications to TMT, ITC and EVP.' The five-milestone roadmap (communication, energy transfer, small matter transport, biological matter transport, bidirectional personal portal) is the author's synthesis of the TMT development logic, not a direct quotation from any single source.
10. The question 'What if we could talk to Einstein directly?' and the broader argument for using ITC as a research tool to consult deceased scientists are from Steve Glanz, 'Transmaterialization Technology Vision: Part 4,' published at transmaterialization.com. The specific framing — that deceased scientists who spent their lives on unresolved problems in physics might be accessible for consultation through a working ITC device — is the author's extension of that argument to its research implications.
11. The question 'Would grief even be in the mix, now that the dimensional bridges have been crossed?' is from Steve Glanz, 'Transmaterialization Technology Vision: Part 4,' published at transmaterialization.com, in the context of the personal impacts of TMT. The analysis of how human grief is structured around the premise of permanent loss, and how the portal would change that structure without eliminating all grief, is the author's extension of that question into its psychological and cultural implications.

Part Four — The Stakes

CHAPTER ELEVEN

Healing, Guidance, and the Inner Life

What TMT Would Mean at the Scale of a Single Human Being

The preceding chapters have been largely concerned with the large scale: the engineering program, the theoretical frameworks, the civilizational implications of the portal, the transformation of science and religion and the structure of mortality itself. These are real and important, and they provide the context within which the smaller scale becomes legible. But the smaller scale is where most human life is actually lived — in the specific grief of a specific person, in the particular body of someone who is ill, in the quiet of a room where someone is trying to understand who they are and why they are here.

This chapter is about that scale. It is about what Transmaterialization Technology would mean for individual human beings in their ordinary lives: for their health, their grief, their spiritual development, their access to guidance, and their understanding of their own history as conscious beings. The Vision essays at the heart of the transmaterialization.com program include several concrete scenarios — specific people in specific situations, imagined in a world where the technology has been developed — and those scenarios are worth dwelling on, because they do something that theoretical argument alone cannot: they make the vision emotionally tangible. They translate engineering into experience.

This chapter also examines what the evidential tradition in healing research already shows — not what the technology might eventually make possible, but what anomalous healing effects have already been documented, and what they imply about the nature of the body and its relationship to the informational substrate that the CIF framework describes. As with the survival evidence reviewed in Chapter Three, the healing evidence is imperfect and contested. But it is real, and it points in a direction that TMT devices are specifically designed to make more accessible.

The Subtle Body: What It Is and Why It Matters

Every major healing tradition in the world — Ayurvedic medicine, Traditional Chinese Medicine, Tibetan medicine, the Western hermetic traditions, the Hawaiian healing system of Huna — describes the human being as more than the physical body. It describes an energetic or informational body that coexists with the physical one, that is more fundamental than the physical one in the sense that the physical body's health is a downstream expression of the energetic body's state, and that can be perceived, assessed, and treated by practitioners with the appropriate sensitivity and training.

The terminology varies: prana, chi, the vital force, the etheric body, the subtle anatomy. The descriptions are not identical across traditions and cannot be reduced to a single unified account without violence to their particularity. But the convergence is striking. Independent healing traditions, developed across millennia on different continents without contact with each other, all concluded that the human body has a non-physical dimension that is real, structured, and clinically significant. The acupuncturist's meridian system — the network of channels through which chi circulates — maps, in its major pathways, onto the anatomical distribution of the autonomic nervous system in ways that are improbable as coincidence. The chakra system of Vedic medicine locates energy centers at positions that correspond, with reasonable precision, to the major nerve plexuses and endocrine glands of the physical body.

Modern biofield research has begun to provide instrumental support for these descriptions. Living organisms emit biophotons — coherent light at intensities far below ordinary vision — whose patterns correlate with health states and can be disrupted by pathological processes before those processes become visible in physical tissue. Measurements of the body's electromagnetic field show that healers produce distinctive field configurations in their hands during healing sessions — configurations with specific frequency characteristics that differ from their own baseline and from those of non-healers. Kirlian photography and its successors have documented field anomalies around living systems whose significance is still disputed but whose existence is increasingly difficult to deny. The biofield is real in the sense that it is measurable. Whether it is what the traditional systems describe it as being is a further question that IEV devices — the Instrumental Energy Visualization class of TMT instruments — are specifically designed to answer.¹ The clinical implication, if the biofield research supports the traditional account, is enormous. It means that disease has a pre-physical phase: a period during which the informational template of the body is distorted or disrupted before the physical tissue reflects that disruption. A person with cancer, on this model, had a cancer at the energetic level before they had a cancer at the physical level. The window for intervention was wider than conventional medicine perceived, and the intervention appropriate to the energetic level is different from the intervention appropriate to the physical one. IEV devices that can render the subtle body visible in real time — that can show a healer or a physician the energetic state of a patient's body with the specificity and objectivity of a medical imaging system — would open a dimension of diagnostic and therapeutic access that conventional medicine does not currently possess.

Two instrumentation lineages have pushed this documentation furthest. The Russian biophysicist Konstantin Korotkov, building on the Kirlian effect, developed Gas Discharge Visualization (GDV) — a camera system that measures

the corona discharge from a subject's fingertips under a brief high-voltage pulse, producing a full-body energy field map from the measurements. Korotkov has used GDV to document changes in the biofield associated with health, emotion, and meditation states, and to track changes at the moment of death — work that has attracted both significant scientific interest and significant controversy, reflecting the standard difficulty of novel measurement systems in this domain. Guy Coggins, working in a different tradition, developed the AuraCam system, which uses galvanic skin measurements at the hands to generate a color representation of what practitioners interpret as the aura field. Neither system constitutes a verified map of the subtle body as described in the traditional accounts — the measurements are real, the interpretation remains contested. But they represent exactly the kind of instrumental approach that IEV research would extend and refine: replacing subjective perception with objective measurement, generating data that can be shared, replicated, and critiqued.

A third contribution worth noting is the work of Desda Zuckerman, whose Sacred Anatomy framework maps the subtle body at a level of specificity that goes considerably beyond traditional chakra systems. Zuckerman describes a layered structure of energy bodies, each with distinct functional roles and specific relationships to different aspects of physical and psychological health, developed through decades of direct perceptual work with clients. Whether the architecture she describes corresponds to an objective feature of subtle anatomy or to a sophisticated interpretive framework developed through clinical practice is precisely the kind of question that IEV instruments could begin to answer — by testing whether different trained practitioners converge on the same observations when given the same subject, and whether the observations predict therapeutic outcomes that the practitioners themselves did not anticipate.

John: The Self That Sees Itself

The first of the Vision Part 4 personal scenarios describes someone whose name we can take as John, enrolled in a course in personal development, learning to sense the subtle anatomy of his own soul. In the present world, this learning depends entirely on the sensitivity of his own perception — on a faculty that is unequally distributed, difficult to verify, and vulnerable to the distortions of wishful thinking, anxiety, and prior expectation. In the TMT world, the scenario continues: with visualization tools, John can see his subtle anatomy clearly. He can observe how every thought and action affects it, like biofeedback on steroids. He evolves rapidly.² The biofeedback analogy introduced in Chapter Six is precise here, and worth applying directly. John does not acquire a new capacity any more than a biofeedback trainee acquires a new physiological process — the energy field, like the heart rate variability a biofeedback device makes visible,

was always there and always available to influence. What changes is information: he can now act on what he could previously only react to.

IEV devices would extend this principle to the subtle body. The person in John's scenario is not acquiring new energetic capacities. He has had an energy field his entire life. What changes is that he can now see it — can observe the relationship between his emotional states and his field configuration, between his thoughts and his chakra activity, between his lifestyle choices and the coherence of his biofield. This visibility transforms development from a slow, uncertain, internally assessed process into something closer to empirical training: you try something, you observe the effect, you adjust. The rate of development is not determined by the depth of natural talent or the luck of finding a gifted teacher. It is determined by the quality of the feedback and the intelligence of the response to it.

This matters beyond individual development. It matters because the subjective filtering problem that makes current energy work so difficult to evaluate — the problem that means we cannot tell whether a practitioner's descriptions of their client's energy field are accurate perceptions or projections — would be substantially resolved. The client could see what the practitioner sees. Independent observers could verify or refute the practitioner's descriptions. Energy medicine would become, not overnight and not without continued complexity, an empirical discipline with shared objective reference points.

Mary: The Lives Before This One

Past-life memory research — the work of Ian Stevenson and Jim Tucker reviewed in Chapter Three — has established that children sometimes spontaneously recall previous lives with a specificity and accuracy that cannot be accounted for by ordinary means. These memories typically fade by middle childhood. They arise unbidden, without the child having sought them. And they are, in the strongest cases, verifiable against historical records.

The second personal scenario in Vision Part 4 describes Mary, who in a TMT world gains access to her past lives — not through dream recall or hypnotherapy, but directly. She can watch or experience part, or all of those lives, like watching a movie. She can also interact with her past selves. This greatly accelerates her development.

The therapeutic implications of reliable past-life access extend considerably beyond the spiritual development context. A significant body of clinical experience — beginning with the early work of Ian Stevenson's colleague Helen Wambach and the later, more systematic investigations of Michael Newton and Brian Weiss — documents the therapeutic effects of past-life recall on conditions that had not responded to conventional treatment: phobias, recurring nightmares,

relationship patterns, somatic symptoms with no identifiable physical cause. The standard skeptical response is that it does not matter whether the recalled past life is real or metaphorical — if the recall resolves the symptom, the mechanism is therapeutic suggestion, not genuine memory. This response is coherent as far as it goes. But it does not account for the cases where recalled past-life details were subsequently verified against historical records — cases where the therapeutic effect was accompanied by accurate historical information that the patient could not have known. In those cases, the suggestion hypothesis requires the further assumption that the patient was also accessing genuine historical information through some anomalous means — at which point the reincarnation hypothesis becomes considerably more parsimonious.³ What ITC and IEV devices together might make possible, in the direction Mary's scenario points toward, is access to the informational record of previous lives through instrumental rather than hypnotic or spontaneous means. The CIF framework describes personal identity as an informational attractor — a stable pattern in the informational substrate of reality that persists across physical lifetimes. If that attractor encodes the history of previous incarnations, and if ITC devices can couple to attractors of the appropriate kind, then the instrumental retrieval of past-life information is a specific engineering target, not merely a philosophical aspiration. It is among the more speculative targets in the TMT program — further from current capabilities than communication with deceased individuals. But it is consistent with the framework, and the therapeutic implications, if it were achievable, would be substantial.

Bill: Direct Access to Guidance

The third scenario describes Bill, who through the new technology can access his higher self, his soul group, his guides, angels, fairies, and other beings. He does not need to rely on psychics, ministers, or counselors. He still has the choice to learn the lessons of life, to gain moral foundations, intellectual capacity, talents and powers in the old-fashioned way without these tools. But if he so desires, they are there at his disposal for his accelerated development.

The guidance dimension of TMT is among its most delicate, because it operates in territory that is simultaneously among the most important to individual human development and the most vulnerable to abuse, projection, and self-deception. The history of mediumship, channeling, and spiritual guidance is full of cases in which people received what they believed to be authoritative guidance from non-physical sources — and in which that guidance reflected the medium's own unconscious material, cultural biases, and wishful thinking more than any external reality. The spiritual direction tradition in the Catholic Church developed precisely because of the recognition that inner experience, however genuine, requires external grounding and testing. The contemplative traditions of

Buddhism and Hinduism both include extensive teachings on the dangers of mistaking projection for perception, and of taking instruction from inner voices without the capacity to assess their source.

TMT does not dissolve these dangers. It changes their character. The subjective filtering problem — the medium's personality shaping what comes through — is substantially reduced when the channel is instrumental rather than personal. A voice that appears in a recording, or a message that appears on a screen, carries its own evidential weight: it is external to the recipient's consciousness, assessable by independent observers, and not modifiable after the fact by the recipient's interpretation. This is not a guarantee of accuracy — the history of ITC includes many examples of researchers who interpreted ambiguous signals in ways that confirmed their own beliefs. Tom Butler's *Implicit Cosmology*, discussed in Chapter Six for what it contributes to the engineering question of operator coupling, is equally relevant here on the interpretation side, because Butler has been unusually direct about how readily an operator's prior conviction shapes what they hear in an ambiguous recording. His model treats the practitioner's intention and belief as a real, active variable in the coupling itself — the morphic field that organizes EVP formation is shaped by what the practitioner expects and wants to find — which means the confirmation-bias risk this chapter is describing is not, on Butler's account, an external contamination of an otherwise clean signal. It is built into the same mechanism that makes contact possible in the first place. This is a more demanding conclusion than the simpler picture in which bias is just a listening error to be corrected with better controls; it suggests that interpretation and coupling cannot be fully separated, and that the discipline a practitioner brings to assessing what comes through is not merely a check on the process but part of the process itself. The instrumental channel narrows the space in which bias can operate undetected, but it does not remove the practitioner's own expectations from the system they are using to make contact. This is a different epistemological situation from one in which everything passes through the recipient's personal perceptual filter before anyone else can evaluate it, but a more accountable and verifiable one — a meaningful step toward the kind of reliability that the field has long needed. The combination of an instrumental channel with appropriate discernment — the developed capacity to assess the quality and reliability of what comes through, including one's own readiness to hear what one hopes for — is the TMT framework's answer to the guidance problem. The instrument provides accountability. The developed person provides judgment. Neither alone is sufficient; together they constitute something that neither traditional mediumship nor unguided contemplative practice currently offers.⁴ The reference in Bill's scenario to access to 'his higher self, his soul group, his guides, angels, fairies, and other beings' deserves a moment's attention. These categories — familiar from the literature of spiritualist and New Age traditions — are not

presented in the TMT Vision essays as established facts but as the kinds of contact that instrumental access would make assessable. Whether the entities encountered through TMT devices are what traditional frameworks describe them as being is one of the most interesting questions the technology would pose. The technology does not presuppose the answer. It creates the conditions under which the question can be empirically examined.

A different existing pathway to similar territory deserves mention here, if only because it is the pathway most readily available to people today who want some version of what Bill's scenario describes: psychedelic substances. A substantial and growing body of contemporary research documents that compounds including psilocybin, DMT, and ayahuasca reliably induce experiences that participants describe in terms remarkably close to the guidance and contact experiences this chapter has been discussing — encounters with apparently autonomous intelligences, a felt sense of communication with non-physical entities or a higher dimension of reality, and a quality of certainty about what was experienced that participants frequently describe as exceeding that of ordinary waking life. Whatever the correct interpretation of these experiences — and the range of serious interpretation runs from pharmacologically generated hallucination to genuine, chemically facilitated access to a non-physical domain that is normally inaccessible to ordinary waking consciousness — the phenomenology overlaps with what TMT devices are being proposed to provide instrumentally. This pathway has real virtues: it is immediate, requires no engineering development, and has already been used by a meaningful number of people. It also has a real and disqualifying limitation as a general solution to the access problem this book has been describing since Chapter Six: it is not scalable in the way a manufactured instrument could be. It carries legal risk in most jurisdictions, carries genuine psychological risk for some individuals and is contraindicated for others, requires careful preparation and guidance to be used safely, and depends on a substance that must be grown, synthesized, or harvested rather than simply produced at the scale a smartphone-class device could be. Psychedelics are best understood, in the context of this chapter's argument, as a third existing pathway alongside contemplative practice and traditional mediumship — genuine, valuable, and already serving some of the access need TMT is designed to address at scale, but not a substitute for the broader engineering program this book describes.⁵

Sharon: Healing at the Informational Level

The fourth scenario describes Sharon, a healer who has been very successful in her career. In the TMT world, she now has access to guidance and extra-sensory tools that provide detailed information about her clients. Her skills skyrocket.

Sharon's scenario points toward what is probably the most immediately tractable application of TMT for personal wellbeing: the enhancement of healing practice through instrumental access to the informational body. The research basis for this application is more developed than it might appear from outside the field.

William Bengston's work on energy healing — documented over decades of controlled laboratory experiments, the results of which have been published in peer-reviewed journals and replicated across independent laboratories — demonstrated that mice injected with a typically fatal mammary tumor line could be cured at rates of approximately 90% by practitioners using a specific hands-on healing technique involving rapid cycling of mental imagery. The control mice, including mice at other laboratories with no practitioners present, died of their tumors on schedule. The experimental mice, with rare exceptions, did not. Bengston has published the experimental data and the protocol; independent researchers have replicated the basic effect. The mechanism is unknown. What is known is that something in the interaction between the practitioner's intentional state and the biological system of the mouse produces a consistent, measurable, reproducible therapeutic outcome that conventional biology cannot account for.⁵ What the Bengston research suggests, and what IEV devices would make visible and verifiable, is that the healer is doing something real at the energetic or informational level of the patient's biology — something that has downstream effects on the physical body measurable in tumor regression and survival rates. The practitioner is not imagining these effects, and they are not placebo effects in any simple sense: the mice do not have placebo responses, and the effect persists even in mice that are not in the same room as the practitioner. What is missing is the instrumental capacity to see what the healer is doing at the energetic level — to render the interaction between the practitioner's field and the patient's field visible in real time, assessable by independent observers, and potentially optimized in response to what the instruments show.

The Bengston research sits within a broader, and considerably more contested, tradition of frequency-based and energetic healing approaches that includes Royal Rife's experiments with resonant frequencies targeted at specific pathogens, and the field of radionics and psychotronics, which proposes that subtle energetic signatures can be detected and influenced at a distance. These approaches receive fuller treatment in Chapters Six and Thirteen, where the theoretical and governance questions they raise are considered. What is relevant here is simply that the Bengston results, if they hold up to continued replication, provide the kind of solid empirical anchor that the broader tradition of energetic medicine needs: a rigorously controlled demonstration, with standard laboratory animals, that practitioner-intention can produce measurable biological effects at

the level of tumor regression — the most conservative possible outcome measure.

Sharon's scenario imagines the healer who already has genuine skill being equipped with this instrumental visibility. The result — her skills skyrocket — is not an expression of naive technological optimism. It is the prediction that results from applying the biofeedback principle to healing practice: when you can see what you are doing, you can do it better. The healer who can see the patient's energetic field in real time, observe the effects of her interventions as they occur, and adjust her approach in response to objective instrumental feedback is in a qualitatively different position from the healer working entirely from proprioception and intuition. Both forms of information matter. But their combination is more powerful than either alone.

Joe: Grief and Its Transformation

The fifth scenario is perhaps the most emotionally immediate. Joe's grandfather has just passed on. He can talk to his grandfather on the other side psychically, or use the services of a medium. But mediums are only as good as their subjective filters. What if Joe could access his grandfather directly? How would this revolutionize the way we navigate the grief process? Would grief even be in the mix, now that the dimensional bridges have been crossed?

This question, posed rhetorically in the Vision Part 4 essay, is not rhetorical at all. It is one of the most important questions that the development of TMT would pose. And the answer is not simply that grief would disappear, because that would require a misunderstanding of what grief is.

Grief is not only the pain of absence. It is also the pain of finality — the knowledge that the relationship, as it was, cannot continue; that the person is gone in a specific, physical, unrecoverable sense; that no amount of love or longing or effort will bring them back. This dimension of grief — the one that the death of a child or a spouse or a parent makes so crushing — is the dimension that the one-way door creates. It is not the sadness of physical separation, which is painful but manageable. It is the certainty of permanent loss: that all future occasions on which one might have spoken to this person, laughed with them, disagreed with them, sought their counsel, told them things — all of these are foreclosed.

The psychomanteum research of Raymond Moody, and the subsequent investigations of Arthur Hastings, William Roll, and Dianne Arcangel, documented that even the imperfect, unverified, subjectively filtered reunion experiences that the psychomanteum produced had measurable effects on grief. Participants reported reduced grief intensity, resolution of unfinished business, a changed sense of the deceased person's continued existence, and in many cases a

fundamental shift in their understanding of what death is. These effects were produced by experiences that most of the researchers involved did not claim to verify as literal contacts — that might have been hallucination, creative imagination, or wish fulfillment. And they still moved the needle on grief substantially. The implication is that verifiable, evidential, instrumental contact — the kind that TMT devices are designed to produce — would move it much further.⁶ In a world where the dimensional bridges have been crossed — where Joe can reach his grandfather not through a medium whose filters he must discount but through an instrument whose outputs are assessable — the grief process is fundamentally altered. Not eliminated. The grandfather is still physically absent. The daily presence of another human being cannot be replaced by instrumental communication, however reliable. But the dimension of grief that is most devastating — the certainty that the relationship is over, that the person is simply gone — is removed. Death becomes something more like a migration: real separation, genuine change, authentic loss of daily presence, but not the annihilation of the person or of the relationship. This is not reinventing the wheel. Sarah Estep, founder of the American Association of Electronic Voice Phenomena and one of the field's most methodologically careful early practitioners, documented extensively the relief that EVP contact — even ambiguous contact — provided to grieving individuals. TMT would not be introducing a new human need; it would be building infrastructure to meet one that practitioners have been addressing informally, with limited and variable tools, for decades.

This transformation of grief is, in the long view, the most democratic of TMT's potential gifts. Unlike the portal, which addresses mortality directly but requires the most advanced technological development, instrumental communication with the deceased is the most immediate and achievable milestone on the TMT roadmap. It is the milestone that Chapter Seven identified as the pragmatic key to cultural acceptance — the demonstration that would change the conversation. It is also the milestone whose human benefit, if achieved, would be immediate, universal, and profound.

The Integration of Outer and Inner

Across all five of these scenarios — John's self-observation, Mary's past-life access, Bill's guidance network, Sharon's enhanced healing, Joe's grief transformed — a common theme emerges: the integration of outer and inner. TMT devices, in each case, do not replace inner development. They give it something to work with, something to work against, something to see itself in. They make the inner life accessible to a form of observation that can be shared, assessed, corrected, and developed in dialogue with other people and with the instruments themselves.

This is the biofeedback principle generalized. Biofeedback does not replace the capacity for self-regulation; it makes that capacity trainable in a way that it was not without the feedback. IEV and ITC devices do not replace the capacity for healing, guidance, and spiritual development; they make those capacities trainable, assessable, and accessible to people who could not previously access them at all. The result is not the displacement of inner life by outer instrumentation. It is the enrichment of inner life by outer feedback.

The specific framing in the Vision essays is that TMT provides 'automated spiritual guidance for all who have access to ITC equipment, and freedom from the reliance on mediums and channelers exclusively.' The word 'automated' here is perhaps slightly misleading — the guidance comes from non-physical intelligences through instrumental channels, not from an algorithm — but the underlying point is sound. The access to spiritual guidance that has historically required either exceptional personal gifts or expensive consultation with intermediaries of uncertain reliability would become, in a TMT world, a standard feature of personal life: available to everyone, assessable by instrumental means, independent of the variable quality and potential distortions of any particular human intermediary.⁷ The Vision essays also note, with appropriate care, that intuitives and counselors will not be put entirely out of business. The instrument provides access to sources; the developed person provides interpretation, integration, and the wisdom to know what to do with what they receive. These are different functions, and both matter. A person who has access to clear instrumental contact with a deceased loved one still needs help understanding what the contact means for their grief process, their remaining relationships, and their understanding of their own life. A person who can see their subtle body clearly still needs help interpreting what they see and integrating that understanding into their choices about health, healing, and development. TMT provides access. What a person does with that access requires the full range of human wisdom, relationship, and discernment that no instrument can provide.

The Scale of the Gift

It is worth stepping back, at the end of this chapter, and holding these scenarios together. A technology that could do what the TMT Vision essays describe — make the subtle body visible to its owner, provide access to past-life records, offer direct instrumental connection to non-physical guidance sources, enhance healing practice with real-time energetic feedback, and transform grief through verifiable contact with the deceased — would constitute a gift to individual human life whose scale is difficult to overstate.

Consider how much of human suffering is concentrated in these domains. The unexplained illnesses whose pre-physical phase was invisible until the physical damage was already extensive. The phobias and recurring patterns and

somatic symptoms that respond to nothing in the conventional treatment repertoire and that past-life work sometimes resolves. The spiritual loneliness of people who want genuine contact with a non-physical dimension of reality but cannot access it through the methods currently available — who have neither the natural gifts of a medium nor the years of contemplative practice required to develop reliable inner access. The grief of bereavement, which is the deepest and most universal of human sufferings and which conventional medicine can do relatively little to address. And the personal development process itself — the effort to understand who one is, where one comes from, what one is here to do — which proceeds, for most people, with very little reliable feedback and enormous uncertainty.

TMT addresses all of these. Not perfectly, not immediately, and not without the ethical complexities and unintended consequences that Chapter Five described. But it addresses them at a level of depth and specificity that no currently available approach comes close to. This is the personal scale of the book's argument. The engineering program described in the preceding chapters is not abstract. It is pointed at these specific forms of human suffering and limitation, with the intention of making them more tractable, more accessible to intervention, and ultimately more transformable into the forms of development and understanding that every human being deserves access to.

Notes

1. The biofield research literature is summarized in Beverly Rubik, 'The Biofield Hypothesis: Its Biophysical Basis and Role in Medicine,' *Journal of Alternative and Complementary Medicine* 8 (2002), 703–717. Biophoton emission by living organisms and its relationship to health states is reviewed in Roeland van Wijk and Eduard van Wijk, 'An Introduction to Human Biophoton Emission,' *Complementary Medicine Research* 12 (2005), 122–134. The correlation between traditional meridian and chakra system locations and anatomical structures (nerve plexuses, endocrine glands) is discussed in James Oschman, *Energy Medicine: The Scientific Basis* (Edinburgh: Churchill Livingstone, 2000). The transmaterialization.com essays discusses the biofield in the context of IEV devices and the CIF framework, particularly in the foundational Vision essays and the 'What Is the Basic Substance of Subtle Reality?' document, which identifies biofield visualization as one of the primary applications of IEV technology. 
2. The personal development scenarios — John, Mary, Bill, Sharon, Joe, and Cheryl — are from Steve Glanz, 'Transmaterialization Technology Vision: Part 4,' published at transmaterialization.com. The scenarios are presented there as illustrative thought experiments rather than predictions. The biofeedback analogy for IEV-assisted personal development ('like biofeedback on steroids') is from the John scenario in that document and is used throughout this chapter in its literal rather than hyperbolic sense: the mechanism being described is precisely the biofeedback mechanism applied to the subtle body rather than the physiological body. 
3. Helen Wambach's past-life regression research is documented in *Reliving Past Lives: The Evidence Under Hypnosis* (New York: Harper and Row, 1978). Brian Weiss's therapeutic use of past-life regression and its clinical outcomes are described in *Many Lives, Many Masters*

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(New York: Simon and Schuster, 1988) and subsequent publications. Michael Newton's research into between-life states and their therapeutic applications is in *Journey of Souls* (St. Paul: Llewellyn, 1994). The specific claim that past-life recall has therapeutic effects on phobias, somatic symptoms, and relationship patterns that had not responded to conventional treatment is documented in these sources and reviewed in Jim Tucker, *Return to Life* (New York: St. Martin's Press, 2013). The argument that the suggestion hypothesis is insufficient for cases where recalled past-life details were subsequently verified follows Ian Stevenson's methodological analysis in *Children Who Remember Previous Lives* (Charlottesville: University Press of Virginia, 1987). 

4. The epistemological distinction between instrumental and subjective channels for spiritual guidance — and the argument that instrumental channels provide a different kind of accountability while still requiring discernment for interpretation — is the author's development of principles stated in the transmaterialization.com Vision essays, particularly the passage from Vision Part 2: 'Objective information and guidance, free from the subjective biases of most psychics. Why go through a personality filter when you have direct access? Intuitives will not be put entirely out of business. But the client will now have direct access to sources, leaving the intuitive to focus on counseling and healing.' The classical contemplative traditions on the dangers of uncritical acceptance of inner guidance are discussed in Thomas Dubay, *Fire Within* (San Francisco: Ignatius Press, 1989) for the Christian contemplative tradition, and in Daniel Brown and Jack Engler, *Transformations of Consciousness* (Boston: Shambhala, 1986) for the Buddhist tradition. 
5. The phenomenology of psychedelic-occasioned mystical and entity-contact experiences, including their resemblance to other reports of contact with non-physical intelligences, is documented in Roland Griffiths et al., 'Psilocybin Can Occasion Mystical-Type Experiences Having Substantial and Sustained Personal Meaning and Spiritual Significance,' *Psychopharmacology* 187 (2006): 268–283, and in subsequent replications at Johns Hopkins and other research centers. The specific phenomenon of apparently autonomous entity encounters under DMT is documented in Pascal Michael et al., 'An Encounter with the Other: A Thematic and Content Analysis of DMT Experiences from a Naturalistic Field Study,' *Frontiers in Psychology* 12 (2021). The legal status of these substances varies by jurisdiction and is in active flux in several U.S. states and countries as of this writing; nothing in this discussion should be read as legal or medical guidance. 
6. William Bengston's energy healing research is documented in *The Energy Cure* (Louisville: Sounds True, 2010) and in multiple peer-reviewed publications including Margaret Moga and William Bengston, 'Anomalous Magnetic Field Activity During a Healing Experiment,' *Journal of Scientific Exploration* 24 (2010), 397–410. The mice experiments — using a mammary tumor line that is typically 100% fatal — produced cure rates of approximately 87.9% across multiple replications in Bengston's laboratory and in independent laboratories. The experimental protocol (rapid cycling of mental imagery while applying hands-on treatment) has been published and taught. The reference to Bengston in the transmaterialization.com materials appears in the context of anomalous healing as evidence for the IPH (Instrumental Paranormal Healing) class of TMT devices. 
7. Raymond Moody's psychomanteum work and its therapeutic effects on bereavement are described in *Reunions: Visionary Encounters with Departed Loved Ones* (New York: Villard, 1993). The subsequent investigations by Arthur Hastings, William Roll, and Dianne Arcangel are documented in multiple publications of the Institute of Noetic Sciences and the Rhine Research Center. The specific findings cited here — reduced grief intensity, resolution of unfinished business, changed understanding of death — are from Dianne Arcangel, *Afterlife Encounters: Ordinary People, Extraordinary Experiences* (Charlottesville: Hampton Roads, 2005) and from the transmaterialization.com essay collection document on the

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psychomanteum, which cites these researchers explicitly in the context of grief counseling applications. 

8. The quotation — 'automated spiritual guidance for all who have access to ITC equipment, and freedom from the reliance on mediums and channelers exclusively' — is from Steve Glanz, 'Transmaterialization Technology Vision: Part 2,' published at transmaterialization.com. The subsequent passage — 'Intuitives will not be put entirely out of business. But the client will now have direct access to sources, leaving the intuitive to focus on counseling and healing' — is from the same document. The author's characterization of the word 'automated' as potentially misleading is an editorial observation, not a quote.

CHAPTER TWELVE

Faith, Proof, and the Structure of Belief

What TMT Would Mean for Religion, Spirituality, and Those Who Prefer Nature's Path

Two distinct objections to the TMT research program come from directions that might seem opposite but share a common root. The first comes from organized religion and from the broader tradition of faith: the suspicion that technology has no business reaching into the sacred, that the non-physical dimensions of reality are not subject to engineering, and that attempting to make them so is a form of hubris or desacralization. The second comes from what might be called spiritual naturalism: the conviction, articulated by thoughtful thinkers like Rudolf Steiner, William Henry, Mark Passio, Charles Eisenstein, and Michael Tellinger, that authentic human development is an organic, inward process that technology corrupts rather than accelerates.

These objections are not the same. The first is primarily theological: it is about what the sacred is and whether technology can touch it. The second is primarily philosophical: it is about the nature of human evolution and whether the tool-making impulse is friend or enemy to the soul. But they share the intuition that something important is being bypassed or violated when we try to engineer access to dimensions of reality that, in the received understanding, require inner work to reach.

This chapter takes both objections seriously. It does not dismiss them. Several of their central concerns — about dependency, about access concentration, about the collapse of religious certainty before adequate wisdom has been developed to replace it — are genuine risks that the TMT framework explicitly acknowledges. But the chapter also argues that both objections, on careful examination, rest on premises that either do not withstand scrutiny or that, when correctly understood, are actually arguments for the TMT program rather than against it.

What Religion Has Always Been Asking

The major religious traditions of the world are not primarily systems of ethics or of metaphysical speculation, though they contain both. At their deepest level, they are organized responses to a set of questions that human beings cannot stop asking: What am I? Where did I come from? Where am I going when I die? What is the nature of the power that underlies everything? How should I live in light of that nature?

These questions are not going away. They are not the product of ignorance that education will dissolve.

They arise from the structure of human consciousness: from the fact that we are self-aware beings who know we are going to die, who experience both the pull of something that seems larger than ourselves and the isolation of individual selfhood, who feel the gap between what we are and what we sense we could be. Every religious tradition is an attempt to provide a map for navigating that gap. The map varies — enormously, in ways that have produced both the great flowering of human culture and the great bloodbaths of religious conflict. But the territory being mapped is the same.

TMT does not abolish those questions. It changes the conditions under which they are answered. And that change is, on balance, a profoundly religious development, even if it does not look like one from the inside of any existing tradition.

What Happens When the Invisible Becomes Visible

The Vision Part 3 of the transmaterialization.com program describes several scenarios of religious encounter with a TMT world, presented explicitly as thought experiments rather than predictions. A fundamentalist Christian who can observe the afterlife dimension discovers not heaven and hell as she understood them, but a continuum of planes corresponding to states of consciousness and evolutionary need. Her belief system is shaken; she is challenged to revise it in light of what she can now observe directly. A Hindu believer who can visit the planes of existence finds some of his cosmological beliefs confirmed and others denied. A Wahhabi Islamist who peers into the afterlife through virtual reality lenses discovers that the reward for murder is not paradise but a confrontation with the pain it caused. A scientist who has spent her career dismissing the afterlife as primitive superstition discovers that it is real.¹ These scenarios are not presented with the confidence of prophecy. The transmaterialization.com Vision essays are explicit that we do not know what the TMT world will reveal. We only know that making the invisible visible will have a profound effect on what people believe and how they act. The scenarios are offered as illustrations of possibility — invitations to imagine rather than predictions to accept. But the logic underlying them is straightforward and worth stating directly: if the non-physical dimensions of reality are real and structured, and if instruments can eventually render them accessible, then the claims that religious traditions make about the structure of those dimensions will become empirically assessable. Not all at once, and not without interpretive controversy. But the trajectory is toward evidence, and evidence has a way of eventually prevailing over assertion.

This trajectory is alarming to many religious people, and understandably so. Faith, in the traditional understanding, is not merely the absence of proof — it is

a mode of relationship with the divine that has its own integrity and its own value independent of any empirical grounding. The mystic who experiences the presence of God in contemplative prayer is not making a claim that would be strengthened by instrumental verification; the experience is self-validating in a way that no external confirmation can enhance and no external disconfirmation can touch. Asking whether the God experienced in contemplation matches the readings of an IEV device is category confusion: the categories belong to different kinds of inquiry.

But most religious believers are not mystics. Most religious claims are not made in the register of ineffable experience. They are made in the register of cosmological assertion: heaven and hell exist, with specific properties; the soul goes to a specific place after death; the moral accounting of a life has specific consequences. These are empirical claims in the sense that they are about how things are, not merely about how they feel. And empirical claims, when they become assessable by instrumental means, face the same standard of evidence as any other empirical claim. The TMT world does not abolish faith. It changes the epistemological status of cosmological assertion.

The Collapse That Could Be a Birth

The most common concern about TMT's religious implications is also the most superficially alarming: that the instrumental verification of some religious claims and the refutation of others would shatter the structures of meaning, community, and moral guidance that religion provides. If people discover that the specific cosmological map their tradition offers is inaccurate in important respects, they may abandon not only the map but everything the map was a vehicle for — the ethical commitments, the communal bonds, the sense of ultimate meaning that organized religion has sustained across millennia.

This concern is real but historically incomplete. The religious traditions of the world have survived many encounters with evidence that challenged specific cosmological claims. Galileo's demonstration that the Earth orbits the Sun was a genuine threat to the cosmological framework of medieval Christianity, and the institutional church's response was disastrously defensive. But the subsequent history of Christian thought is not a history of dissolution; it is a history of creative adaptation, in which the tradition found ways to preserve its deepest commitments while revising the specific cosmological claims that the evidence had undermined. The same process, with variations, characterizes the encounter of every major tradition with the scientific revolution and with Darwin.

The transmaterialization.com Vision Part 3 suggests that the appropriate expectation is not religious collapse but religious convergence: the emergence of what it calls a world religion grounded in confirmed fact. This is admittedly speculative, and the specific form such a convergence would take is impossible

to predict. But the underlying logic is plausible. If the major religious traditions are, at their deepest level, different maps of the same territory — different cultural elaborations of the same fundamental human encounter with something that transcends the individual self — then instrumental access to that territory might reveal, beneath the cosmological divergences that have caused so much conflict, a shared structure that the maps have been pointing toward all along. The differences between heaven and the Buddha-fields and the Sufi paradise and the Hindu lokas might turn out to be, in part, differences in how the same underlying reality has been perceived through different cultural lenses. Or they might turn out to reflect real differences in what different traditions have accessed. Either outcome would be more illuminating than the current situation, in which the claims cannot be compared because neither can be assessed.² The Vision essays note one function of religion that TMT would not automatically replace: the shepherding of moral development through wisdom, community, and practice. Direct empirical access to non-physical reality does not automatically produce moral wisdom. A person who can see the afterlife dimension through an ITC interface is not thereby freed from the need to develop the character, the relationships, and the contemplative depth that allow them to navigate what they see with integrity and compassion. The wisdom traditions of the world's religions are not merely cosmological maps. They are accumulated practical knowledge about how to live as a human being — knowledge that was developed over millennia through the trials and failures of millions of practitioners. That knowledge does not become obsolete when the cosmological map is revised. It becomes more important, because the expanded access that TMT provides requires a corresponding expansion of the inner capacity to use that access well.

The Naturalist Objection: Technology and the Soul

The second body of objection to TMT comes from a different tradition, and it is in some ways more philosophically sophisticated than the religious one. Thinkers like Rudolf Steiner, Charles Eisenstein, William Henry, Mark Passio, and Michael Tellinger share a conviction that authentic human development is an organic, interior process that technological augmentation corrupts rather than enhances. Their concern is not primarily theological. It is developmental: they believe that shortcuts bypass the very difficulties that make growth possible, that dependency on external tools atrophies the inner faculties those tools are supposed to supplement, and that the particular form of technology that has dominated the modern world — materialist, reductionist, oriented toward control and extraction — is especially ill-suited to serve a process of spiritual development.

These concerns deserve a serious response, not a dismissal. Steiner's warning that technology, when divorced from spiritual awareness, reinforces

materialism and deepens the human being's disconnection from the spiritual world, is historically supported. The technological civilization of the past three centuries has produced extraordinary material abundance and extraordinary spiritual impoverishment simultaneously, and the connection between these developments is not coincidental. The smartphone that puts every library in your pocket also makes sustained contemplative silence nearly impossible. The medical system that can repair a broken body with surgical precision has no equivalent capacity for the broken spirit that produced the illness. The concern that adding more technology to a civilization already drunk on it will deepen the problem rather than address it is not irrational.

Mark Passio's position is more nuanced than it is often represented. He does not reject all technology. He endorses decentralized communication systems, sustainable energy, and holistic health technologies — including biofeedback devices — when they are developed in alignment with natural law and the moral principle of non-harm. His objection is specifically to technologies that serve centralized control, that erode individual sovereignty, or that are developed and deployed by those with materialist and reductionist assumptions about the nature of human beings. He would likely evaluate TMT devices by exactly the same criteria: are they empowering or controlling? Are they decentralized or monopolized? Are they developed by people who understand what consciousness is, or by people who treat it as an information processing problem?³ William Henry's position is perhaps the most distinctive. His argument, developed in *The Singularity Is Near* and related work, is that the authentic path of human evolution is the activation of the light body — an organic transformation of the human being into a higher-dimensional form, achieved through love, spiritual practice, and the cultivation of inner radiance. He views transhumanism, in which the biological human is augmented by external technology, as a counterfeit of this process: it copies the form of ascension — extension beyond ordinary biological limits — without its substance. The technology produces a simulacrum of the light body experience without the inner transformation that the genuine article requires and produces.

The TMT framework's response to Henry begins by acknowledging what he is right about: that inner transformation is not optional, and that a technology that bypasses it rather than supporting it would indeed produce something shallow and dependent. The debate is not about whether inner development matters. It is about whether technology can serve that development or only subvert it. And on this question, the disagreement is substantive.

The False Dichotomy

The central premise of the naturalist objection — that nature and technology are oppositional, that the development of one necessarily comes at the expense of the other — is a premise that does not survive careful examination.

The premise does not survive examination even before the question of human tool use is raised, because the dichotomy it assumes — a pristine, unassembled nature standing opposed to artificial construction — does not describe nature at any scale we actually know how to examine. The quantum vacuum itself, the supposedly empty substrate from which everything else is built, is now understood by physics to have structure: a roiling field of virtual particles, zero-point energy, and probabilistic fluctuation from which stable particles condense according to definite organizing principles. Those particles assemble into atoms according to further organizing principles — the same handful of forces and symmetries, operating the same way everywhere in the observable universe. Atoms assemble into minerals and molecules according to the rules of chemistry; molecules assemble into the self-replicating, self-organizing structures of living systems according to the rules of biochemistry; living systems assemble into nervous systems, ecosystems, and eventually civilizations capable of building tools that, in turn, reorganize the matter around them according to new principles those civilizations have discovered. At every one of these levels, what we call nature is the product of assembly: components combining according to rules into structures of greater complexity and capability than the components possessed on their own. This is, in the most literal sense available, what synthesis means. Nature, examined honestly from the quantum vacuum upward, is already and has always been synthetic — not in the pejorative sense the naturalist objection intends, but in the precise sense that it is built, layer by layer, through processes of organized assembly. Human technology, on this view, is not an alien intrusion into an otherwise unassembled natural order. It is the most recent layer in a single continuous process of assembly that the universe has been conducting since its first moments, carried out now by a species capable of directing some of that assembly consciously rather than only through blind physical law.

This perspective on assembly also illuminates the temporal dimension of technology that the naturalist critique tends to ignore. Technologies are not permanent — they are stages in a longer process. Stone tools gave way to bronze, which gave way to iron, which gave way to steel and silicon. Each stage left non-physical imprints in culture, in the nervous systems of the people who used those tools, in the organizational structures built around them. The digital stage is itself temporary: a layer that biology and consciousness science will eventually supersede in ways we cannot yet fully specify. The appropriate attitude toward any technology is not permanent attachment but strategic use: take advantage of

what the current stage makes possible, knowing it will be transcended, and build the understandings and capacities that will allow the next stage to be something better. TMT, on this view, is not a final destination but the best available next step — one that the current stage of human technological and scientific development has finally made conceivable.

Human beings are tool-using animals. This is not an incidental feature of our species; it is constitutive of what we are. The evolution of the human brain is inseparable from the evolution of the tools that shaped it — the stone tools that selected for fine motor control and planning capacity, the language that selected for the neural architecture of symbolic thought, the writing system that reorganized memory and made possible the accumulated knowledge that we call civilization. Andy Clark's philosophical work on the extended mind makes this point with precision: the boundary between the mind and its tools is not a clear line. The notebook in which you record your thoughts is not merely an extension of your mind; it is, in a meaningful sense, part of your mind. The cultural tools through which human beings have developed their spiritual capacities — the sacred text, the prayer wheel, the labyrinth, the monastery — are not adjuncts to inner development; they are the medium through which that development has historically occurred.

The transmaterialization.com Naturalism essay makes this point directly: 'There is no reason why humans, standalone machines, and human-machine interfaces cannot coexist... There may be a synergistic effect to evolving in all three directions.' And: 'This is not a dehumanizing takeover by machines. It is the humanization of the technological movement.' The humanization framing is important. The objection to modern technology from the naturalist tradition is not to technology as such but to technology developed by and for a civilization that has systematically excluded the spiritual, the metaphysical, and the relational from its understanding of what human beings are. The response is not to reject technology but to develop technology within a different framework — one that begins from a richer understanding of reality and of the human being's place in it.⁴ Steiner acknowledged this himself, with more nuance than his followers sometimes represent. He did not reject technology outright. He warned that technology developed without spiritual awareness would deepen materialism; but he implied that technology developed with spiritual awareness would be a different kind of thing. TMT is precisely the attempt to develop technology within a framework that takes consciousness, spiritual reality, and the non-physical dimensions of existence as its starting point rather than its afterthought. In this sense, TMT is not the technology that Steiner was warning about. It is the technology his warning was pointing toward as the alternative.

The Scalability Problem

The most decisive argument against the naturalist position is not philosophical but empirical: the natural, inward, contemplative path to spiritual development has not scaled. It has worked beautifully for a small proportion of human beings who had the natural gifts, the cultural context, the economic freedom, and the communal support to pursue it seriously. For the vast majority of the species — the billions of people who have lived and died without access to a spiritual teacher, without the leisure for sustained contemplative practice, without the cultural framework that makes such practice intelligible — the inner path has remained a description of something that happens to other people.

This is not a criticism of the path itself. The contemplative traditions are among the most impressive achievements of human civilization, and the people who have walked the path with commitment and depth have produced knowledge and wisdom of extraordinary value. The problem is not the path but its distribution. Enlightenment has never scaled. The great spiritual breakthroughs of human history — the Buddha's awakening, the mystics of every tradition — have been the achievements of exceptional individuals, not of populations.

It is also worth being precise about who, exactly, has reliably crossed into the non-physical territory this book elsewhere calls the portal, because the contemplative mystic and yogi are not the only ones who have claimed to do it without instrumentation. Practitioners of ceremonial magic, working within traditions that long predate and run parallel to mainstream contemplative religion, have described disciplined, repeatable methods — invocation, ritual, sustained intentional focus — for achieving precisely the kind of contact and crossing this book associates with the portal. Users of subtle energy devices, the radionic and psychotronic instruments touched on earlier in this book, represent a hybrid case: not purely organic, since they involve apparatus, but also not the kind of rigorously engineered instrument this book's later chapters describe, occupying a middle ground between unaided contemplative practice and the TMT devices proposed in Chapters Eight and Nine. And users of psychedelic substances, discussed in the previous chapter, represent a fourth route into the same territory, with its own access pattern: more widely available than years of meditative discipline, but, as that chapter noted, not scalable in the way an engineered device could be, and carrying its own distinct legal and psychological risks. None of these four pathways — contemplative discipline, ceremonial practice, subtle energy devices, or psychedelic substances — has solved the distribution problem this section is describing. Each reaches a different and still relatively narrow population, gated by different combinations of temperament, training, resources, legality, and risk tolerance. The diversity of existing pathways is itself evidence for the argument this chapter is making: human beings have been finding their way to the portal by every available means for as

long as records exist, which suggests that the drive toward this kind of contact is a stable and widespread feature of the species, even though no existing pathway, organic or otherwise, has yet made it available to most of the species.

William Henry's light body path faces exactly this problem. It is available, in its fullest form, to people who have the inner gifts to pursue it, the cultural framework that makes it intelligible, and the support structures that allow them to devote substantial time and energy to it. For everyone else — the grieving parent who wants to know if their child still exists, the chronically ill person who needs a different kind of healing than conventional medicine provides, the person born into a tradition whose cosmological map causes more harm than illumination — the inner path provides comfort at best and false consolation at worst. TMT is, among other things, the response to this problem: the development of tools that can bring some portion of what the inner path offers to people who cannot or have not walked it.⁵ The scalability argument does not diminish the inner path. It does not argue that biofeedback is better than meditation, or that an ITC device is a substitute for decades of contemplative practice. It argues that the inner path and the instrumental path are complementary — that each provides something the other cannot, and that a civilization committed to the development of all its members needs both. The expert meditator who has achieved profound inner silence has access to dimensions of non-physical reality that an ITC device cannot provide. The bereaved person who has never meditated and has no prospect of doing so has a need for contact that the expert meditator cannot fulfill for them. TMT serves the latter; the contemplative path serves the former; both serve the person who integrates both dimensions of development.

Technology as Doorway, Not Destination

Perhaps the most important thing to say in response to both the religious and the naturalist objection is this: TMT is not proposed as a destination. It is proposed as a doorway.

A doorway is not the same as the room it opens into. A doorway is transitional, instrumental, subordinate to whatever lies beyond it. The telescope that allowed Galileo to see the moons of Jupiter was not the same as the understanding of planetary motion that eventually followed from what he saw. The EEG that showed meditators producing distinctive brainwave patterns was not the same as the meditative states those patterns reflected. The ITC device that allows a bereaved parent to communicate with their deceased child is not the same as the relationship whose continuation it makes possible.

The transmaterialization.com Naturalism essay uses the biofeedback analogy in exactly this way: 'People learning biofeedback to accelerate mental control of their bodies retain their skills after weaning themselves off the biofeedback devices.' The device is a training environment. What is trained —

the capacity for self-regulation, the sensitivity to inner states, the ability to direct attention deliberately — persists after the device is no longer needed. TMT devices, used wisely and integrated with inner development rather than substituted for it, could serve the same function: making accessible experiences and contacts that, once accessed, develop inner capacities that can eventually be exercised without instrumental support. The mystic who once needed a device to perceive the subtle body might, after years of IEV-assisted practice, be able to perceive it directly. The practitioner who once needed an ITC device to reach a non-physical guide might, with sufficient development, be able to do so without. The technology is the training wheel, not the bicycle. The enemy of human evolution, as the transmaterialization.com Naturalism essay puts it, is never the tool. It is always the intention behind it. Technology developed with materialist assumptions and deployed in the service of control and profit is the technology the naturalist critics are rightly concerned about. Technology developed with the full understanding of what consciousness is, designed to serve the development of human beings rather than their management, deployed with equity of access and ethical oversight — that is a different kind of technology. It is the kind that Passio himself describes as acceptable: technology that respects natural law, enhances rather than diminishes individual sovereignty, and serves the betterment of humanity without harm.

The TMT framework proposes to be that kind of technology. Whether it succeeds in that aspiration depends not only on the engineering — the devices, the protocols, the theoretical frameworks — but on the intentions and the wisdom of the people who develop and deploy it. This is, in the end, the point on which the naturalist critics and the TMT framework actually agree: technology is only as good as the consciousness that develops and uses it. The response to that agreement is not to abandon technology but to take it more seriously — to insist that the development of TMT be accompanied from the beginning by the kind of inner development, ethical reflection, and communal accountability that the wisdom traditions have always known to be essential.

The presentation version of this argument frames it as five transformations. The fear of spiritual disconnection opens into spiritual access, because TMT makes the non-physical world something you can see and hear and interact with, not something you have to take on faith. The worry about dependency softens when you consider that these tools are designed like biofeedback — they build a capacity in you that eventually stands on its own. The concern about disrupting natural harmony gives way when you realize that what TMT works with is resonance and intention — the very languages that nature already speaks. The fear of transhumanism dissolves when you recognize that TMT is built from the inside out, with metaphysics woven into the engineering from the beginning, not retrofitted afterward. And the worry that technology substitutes for inner

development is answered by the biofeedback model: the instrument trains the capacity, and the capacity outlasts the instrument.

There is one further dimension of the naturalist critique that deserves acknowledgment, because it points to something the TMT framework is actively beginning to address: the possibility that the most important sources of wisdom available to human beings are not other human beings, even human beings who have survived death, but forms of intelligence and experience that are not and have never been human. Other life forms — not as a romantic category but as a biological reality — possess forms of environmental sensitivity, temporal experience, and embodied intelligence that are simply not available to a nervous system organized around the primate perceptual and cognitive toolkit. The possibility of off-planet intelligence, taken seriously by the more careful investigators in that domain, extends the question further. If the spectrum of conscious experience available in the universe is vastly wider than the human range, then Transmaterialization Technology, even at its most developed, would be opening a window that, once opened, invites a panorama far wider than its initial aperture. The TMT framework is, for now, focused on what the human situation most urgently requires: reliable two-way contact with the dimensions of reality closest to our own. That focus is appropriate. But the larger horizon is real, and the architecture of the technology should be designed with enough flexibility to accommodate sources of signal that do not originate from human consciousness.

Where the Two Traditions Meet

Religion and spiritual naturalism, for all their differences from each other and from the TMT framework, share something important with it: the conviction that the visible material world is not the whole of reality, that human beings are more than their biological bodies, and that the relationship between the individual consciousness and the larger reality in which it is embedded is the most important question a person can ask.

TMT is built on exactly that conviction. It is the attempt to take that conviction seriously enough to develop engineering in its light — to refuse the materialist assumption that has constrained science for three centuries and follow the evidence wherever it leads, even when it leads to places that the academic mainstream regards as off-limits. In this sense, TMT and the religious and naturalist traditions are not enemies. They are different approaches to the same fundamental commitment.

The differences are real. TMT's commitment to instrumental verification, to reproducibility, to the standards of empirical evidence, puts it in tension with traditions that ground their authority in revelation, scripture, or the testimony of realized masters rather than in data. TMT's openness to technological mediation

of spiritual experience puts it in tension with traditions that ground their practice in purely interior development. These tensions are productive, not fatal. They are the tensions between complementary approaches to a problem that neither can fully solve alone.

A world in which religion is forced to account for its cosmological claims in the light of instrumental evidence, in which spiritual naturalism is forced to account for its distributional failures, and in which TMT is forced to account for its ethical risks and its dependency on a form of consciousness its devices cannot themselves provide — that is a world in which all three traditions would develop more honestly and more fruitfully than any of them currently does in isolation. The conversation that chapter represents is not a resolution. It is the beginning of a dialogue that, one way or another, the development of this technology will eventually force upon us.

Notes

1. The scenarios in Vision Part 3 — the fundamentalist Christian, the Hindu believer, the Wahhabi Islamist, the New Age cosmologist, the scientific atheist — are from Steve Glanz, 'Transmaterialization Technology Vision: Part 3,' published at transmaterialization.com. They are presented there with the explicit disclaimer: 'The following are scenarios illustrating the aforementioned impacts. Some of these examples include interpretations based on the author's current world view. Other illustrations are simply thought experiments that are not the author's view. We really don't know what to expect, and what we will learn when this new world is upon us. But learn we must.' This chapter maintains that framing scrupulously. 
2. The expectation that TMT would eventually produce something like a world religion grounded in confirmed fact is from Steve Glanz, 'Transmaterialization Technology Vision: Part 3,' in the context of the religious scenarios: 'Breakdowns and breakthroughs in religious thought and practice would ensue, with the possibility of an emergent world religion grounded in science. As religious differences dissolve, world peace would receive a well-deserved shot in the arm.' The qualification that this is speculative is the author's. The comparison of TMT's religious implications to the encounter of religious traditions with Galileo and Darwin draws on Thomas Kuhn's analysis of scientific revolutions and on scholarship in the history of science and religion, including John Hedley Brooke, *Science and Religion: Some Historical Perspectives* (Cambridge: Cambridge University Press, 1991). 
3. Mark Passio's endorsement of specific categories of technology — including decentralized communication systems, sustainable energy, and biofeedback devices — is documented in the transmaterialization.com Naturalism essay, which synthesizes Passio's public lectures and his website *What On Earth Is Happening* (whatonearthishappening.com). The characterization of his position as 'not outright rejection but cautious acceptance, provided that technological advancements are firmly rooted in the principles of natural law and morality' is drawn from that synthesis. The criteria by which TMT would be evaluated under Passio's framework — empowering or controlling? decentralized or monopolized? developed by people who understand consciousness? — are the author's extrapolation from Passio's stated principles to the specific case of TMT. 
4. The two quotations from the Naturalism essay — 'There is no reason why humans, standalone machines, and human-machine interfaces cannot coexist... There may be a synergistic effect to evolving in all three directions' and 'This is not a dehumanizing takeover by machines. It is

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the humanization of the technological movement' — are from Steve Glanz, 'Naturalism vs. Technological Evolution: A Defense of Trans-Materialization Technology,' published at transmaterialization.com. Andy Clark's extended mind thesis is developed in Andy Clark and David Chalmers, 'The Extended Mind,' *Analysis* 58 (1998), 7–19, and elaborated in Clark's *Natural-Born Cyborgs* (New York: Oxford University Press, 2003). ↩

5. William Henry's light body thesis and his critique of transhumanism as a counterfeit of organic spiritual evolution are developed in *The Singularity Is Near* (Nashville: Scala Dei, 2014) and in related lectures and podcast episodes. The specific framing of his position in the TMT context — the Henry vs. Glanz debate presented in the transmaterialization.com presentation slides — draws on the Slide 7 narrative in the TMT presentation document: 'Henry is right that inner development must accompany capability, and that embodiment can't be discarded. I'm right that his purely spiritual model has never scaled, and that treating technology as inherently fallen is a false binary that blocks progress.' 6. The biofeedback analogy — 'People learning biofeedback to accelerate mental control of their bodies retain their skills after weaning themselves off the biofeedback devices' — is from Steve Glanz, 'Transmaterialization Technology: Vision — Part 1,' published at transmaterialization.com, in the context of the three-part response to the question of why technology rather than purely inner development. The application of this analogy to the long-term relationship between TMT devices and the inner capacities they are designed to develop — the device as training wheel that is eventually set aside — is the author's extension of the principle to its logical implication. ↩

CHAPTER THIRTEEN

Power, Access, and the Ethics of a New Technology

Who Controls TMT, Who Benefits, and What Obligations Follow

Every transformative technology in human history has been, simultaneously, a redistribution of power. The printing press democratized access to scripture and subverted the Church's monopoly on interpretation — and enabled propaganda on a scale never before possible. The industrial revolution created unprecedented material abundance — and created the factory system, child labor, and environmental destruction on a scale never before achieved. The internet put the accumulated knowledge of civilization in everyone's pocket — and built surveillance capitalism, enabled disinformation at planetary scale, and concentrated wealth in the hands of a small number of platform owners who had no mandate from their users and no accountability to the public interest. In each case, the technology was real, the benefits were real, and the harms were real. In each case, the harms were not incidental but structural: they arose from the way the technology was developed, owned, deployed, and governed, which in every case reflected the power structures that were dominant at the moment of the technology's emergence.

Transmaterialization Technology would be the most powerful technology in human history. By a very large margin. A technology that enables reliable communication with deceased persons, visualization of the subtle body, instrumental healing at the energetic level, transport of matter through non-physical channels, access to unlimited energy, and ultimately the bidirectional personal portal — such a technology would give its possessors a form of power relative to those without access that would make the advantages of the printing press, the steam engine, and the computer look modest. The ethical stakes of getting this right are correspondingly enormous.

This chapter is the book's sober chapter. It is the one where vision gives way to responsibility, where the excitement of possibility is disciplined by the weight of consequence. It does not argue that TMT should not be developed — the case for developing it has been made across the preceding chapters and stands. It argues that how it is developed, owned, and governed matters at least as much as whether it is developed, and that the current absence of any serious governance framework for a technology of this potential represents a failure of ethical imagination that should be corrected before the technology advances rather than after.

What Is Actually at Stake in Questions of Access

Access to TMT capabilities is not simply a matter of fairness, though it is that. It is a matter of the most fundamental kind of power asymmetry that human society has ever confronted. Consider what access to a working ITC communication device would mean for the person who possesses it relative to the person who does not. The person with access can communicate directly with deceased relatives, advisors, and experts. The person without access must rely on mediums of uncertain reliability, on their own contemplative practice if they have developed one, or on nothing at all. The person with access to working IEV visualization can see the subtle body directly and make health decisions informed by that visibility. The person without can rely only on conventional medicine, which does not yet incorporate the informational body into its diagnostic framework. These are significant advantages — the kind that, in the history of medicine, have typically been monopolized by the wealthy until regulatory and social pressure forced broader distribution.

This is not a purely hypothetical future scenario. The access asymmetry already exists, in an early and informal form, within the current ITC and mediumship community. A number of practitioners — mediums, ITC researchers, and intuitives offering interpretation of recorded sessions — already charge fees for individual sittings, for the analysis of submitted recordings, or for ongoing access to the information they claim to retrieve. There is nothing inherently improper about charging for skilled labor, and the time and training a competent practitioner has invested deserves compensation like any other expertise. But the pattern is instructive precisely because it previews, at small scale, the dynamic this chapter is concerned with at large scale: access to non-physical information is already, today, partly a function of what a person can afford to pay, and a technology that could make that access more reliable and more widely available would either correct this emerging pattern or, if developed and distributed without the equity commitments this chapter describes, formalize and extend it.

The Vision Part 2 of the transmaterialization.com program states this directly: 'We deserve access. It is our right and heritage as sentient beings.' This is a claim about the nature of access to non-physical reality — not merely a policy preference but a statement about what the development of TMT is fundamentally for. The access claim follows from the deeper premise: if non-physical reality is real and is the domain from which every human being comes and to which every human being goes, then access to that reality is not a luxury. It is a birthright. The development of technology that enables such access is not a private commercial opportunity. It is a public good in the most fundamental sense — like clean water, like basic healthcare, like education. The governance framework appropriate to a public good is very different from the governance

framework appropriate to a private commercial product.¹ The history of technologies that began as public goods and were captured by private interests is not encouraging. The internet was built on publicly funded research — ARPANET was a Defense Department project, the World Wide Web was invented at CERN — and was initially conceived as a decentralized, open, and democratic medium. Within two decades, it had been captured by a small number of platform companies whose business model was the monetization of user attention and data, whose governance was private and unaccountable, and whose effects on public discourse, political life, and individual psychology were catastrophic in ways that were not anticipated and are still not adequately remediated. The lesson is not that the internet should not have been developed. It is that the governance framework — or rather the absence of one — was a catastrophic failure that has cost the world enormously.

The Humanitarian Imperative

The humanitarian implications of fully realized TMT — particularly the ITM and IFE classes — are almost impossible to overstate, and they create ethical obligations that bear directly on how the technology must be developed and governed.

The Vision Part 2 catalog of humanitarian implications includes: transport of material instantaneously through space, which could greatly facilitate movement of goods and people throughout the world, saving enormous sums on transport costs; a solution to world hunger via the instantaneous creation of food; freedom from economic scarcity through instantaneous creation of anything material; and resolution of energy shortages, as energy becomes free and ubiquitous. These are not modest aspirations. They describe the solution to the organizing problems of human civilization: the scarcity of food, energy, and material goods that drives conflict, migration, poverty, and the enormous inequality between the world's rich and poor. If ITM and IFE capabilities are real and achievable, they represent not merely a commercial opportunity but a moral obligation — the most pressing one that could exist.² The moral logic is stark. If a technology exists that could eliminate hunger and it is not deployed to eliminate hunger, the people who control that technology bear a form of moral responsibility for the hunger that continues. This is not a novel principle — it is the same principle that has driven the debate about pharmaceutical patents and access to medicines in the developing world, about the ownership of clean energy technologies, about the distribution of vaccines during pandemics. In each case, the tension between the private property rights of the technology's developers and the public interest in the technology's benefits has been fought over in law, policy, and public discourse. In each case, the outcome has been imperfect,

partial, and arrived at only after enormous unnecessary suffering that better governance could have prevented.

TMT would pose this tension in its most extreme form. A technology that can eliminate scarcity itself — that can produce food, energy, and material goods without the physical constraints that currently define the terms of the global economy — is a technology whose private ownership would represent the most dangerous concentration of power in human history. The entity that controls the ITM materialization capability controls, in effect, the material basis of everyone else's existence. That is not hyperbole. It is the direct implication of what the technology can do.

The Weaponization Risk

The Vision Part 2 identifies among the risks of TMT: 'Revelation of secrets that we, as humanity, may not be able to handle, given our aptitude for separatism and war' and 'Misuse of powers to destroy rather than build.' These are important, but they understate the specific and serious risk of military and coercive applications of TMT capabilities.

Consider what a military power with access to ITC communication could do. It could communicate across any distance without electromagnetic signals — without any transmission that can be intercepted, jammed, or traced. It could potentially receive intelligence from deceased persons who possessed information — deceased officers, deceased adversaries, historical witnesses to events that left no documentary record. If psychotronic applications of subtle energy are achievable, it could develop forms of influence over the physical and psychological states of adversaries that operate through channels not currently recognized by conventional physics and therefore not currently guarded against.

Psychotronic weapons — devices that use electromagnetic or other subtle energy fields to affect the consciousness, emotions, or physical health of a target — are not purely theoretical. The Soviet Union invested heavily in psychotronic research during the Cold War, and declassified American documents confirm that the CIA monitored and in some cases duplicated that research. The concern that TMT capabilities could be militarized is not a science fiction scenario. It is the straightforward application of a consistent historical pattern: every significant new physical principle that has been discovered has been examined for military applications, and many have been developed as weapons before they were developed as civilian technologies. The most consequential example is nuclear fission, which was weaponized in the Manhattan Project before any civilian nuclear power plant had been built.³ Two contemporary cases make the same pattern vivid without requiring any reach into history. Drone technology was developed and marketed for photography, agriculture, and recreation; within a decade of widespread civilian availability, weaponized and improvised-weapon

drones had become a defining feature of modern conflict, with the same affordable, mass-produced hardware repurposed for surveillance and attack faster than any regulatory framework could be built to govern it. The technology did not have to be redesigned for military use; it had to be pointed differently and armed, which proved to be a small engineering step from its civilian form. Research into technological influence over cognition and behavior — what is loosely called mind control research in the popular literature, and what the U.S. intelligence community pursued under programs including MKUltra — provides a second, more directly analogous precedent, because it specifically targeted the same domain TMT's psychotronic risk concerns: the use of technological means to act on consciousness without the subject's awareness or consent. Both cases illustrate the same structural lesson the Manhattan Project illustrates at larger scale: a technology's civilian and humanitarian framing does not constrain how it will eventually be used once it exists, and the speed with which a beneficial dual-use technology can be redirected toward coercive or violent ends has, if anything, been increasing rather than decreasing as engineering and manufacturing have become faster and cheaper.⁴ The psychotronic risk is particularly acute because TMT operates through mechanisms that are not currently monitored by any arms control framework. Biological weapons are banned by international treaty. Chemical weapons are banned by international treaty. Nuclear weapons are controlled by the Non-Proliferation Treaty. Electromagnetic weapons — including directed energy weapons — are increasingly governed by international law. But weapons that operate through subtle energetic or informational mechanisms that current physics does not recognize have no governance framework at all, because the relevant conventions were developed on the assumption that physics as currently understood is complete. The development of TMT creates an obligation to develop the governance frameworks before the weaponization occurs — not after, when the weaponized forms will already be deployed and the window for preventive governance will have closed.

The Surveillance Problem

The Vision Part 2 describes a TMT world in which 'nothing is hidden, but we have a choice to see it or not.' The phrase 'we have a choice' is doing enormous work in that sentence, and the work it is doing is precisely the ethical work of governance. In the absence of governance, the choice will not be distributed equally. It will be held by whoever controls the technology.

IEV devices that can visualize the subtle body can also, in principle, be used to read emotional states, intentions, and the informational content of thought at a level of detail that no currently available surveillance technology approaches. If thoughts can be visualized — as the Vision Part 2 explicitly states — then the IEV capability is, among other things, the most complete surveillance technology

ever conceived. A government or corporation with access to IEV devices and without legal constraint on their use would have the capacity to monitor not only what its citizens and employees do but what they think and feel. The implications for privacy, autonomy, and political freedom are totalitarian in character.

This is not a reason to prevent the development of IEV technology. It is a reason to ensure that legal and technical privacy protections are built into the technology from its inception — the way that end-to-end encryption was eventually built into messaging applications, not as an afterthought but as a foundational architectural choice. The design principle that the Vision Part 2 invokes — 'we have a choice to see it or not' — needs to be implemented as a technical and legal constraint on who can access IEV capability and under what conditions. The governance framework for IEV must include: requirements for informed consent before an individual's subtle body or mental states are visualized; prohibitions on unauthorized governmental or corporate use; strong legal remedies for violations; and technical architecture that prevents centralized storage of visualized data that could be accessed without the subject's knowledge.⁴

The Access Architecture: What Would Equity Require

The equity arguments made throughout this book — that access to non-physical reality is a birthright, that the healing and developmental benefits of TMT should be available to all rather than to the wealthy, that the humanitarian applications require universal deployment — all point toward a specific set of architectural choices in how TMT is developed and deployed.

The most important of these choices is open-source development. The transmaterialization.com program explicitly endorses this approach: TMT devices should be designed from open-source components, with open-source software, published schematics, and publicly available protocols. Open-source development is not naive idealism — it is the approach that has produced the most robust and widely deployed technologies of the digital era, from the Linux operating system to the internet protocols to the scientific Python ecosystem. It is the approach that makes independent replication possible, that prevents any single entity from controlling access to the technology through proprietary ownership, and that allows the global research community to contribute to improvement rather than being locked out by patent barriers.

This is a recommendation about the technology's design architecture — what gets published, what gets patented, what gets locked behind proprietary walls — and it is compatible with more than one answer to the separate question of how the organization doing the developing should actually be funded and structured. Chapter Fourteen discusses that organizational question directly, describing a sequence of viable paths — patron-supported independent research,

a formal nonprofit institute, and eventually a technology company once prototypes exist — that are not in tension with the open-source commitment described here. A funded research institute can publish its schematics and protocols openly even while paying its staff and covering its equipment costs; what open-source development rules out is not funding itself but the practice of withholding the underlying knowledge from anyone who has not paid for proprietary access to it. The equity commitment this chapter is describing is about the technology's accessibility once developed, not about how the development work itself gets resourced — and a varied, pragmatic approach to the latter question, of the kind Chapter Fourteen lays out, is entirely consistent with an uncompromising open-source commitment on the former.

The internet precedent is instructive in both directions. The open-source protocols on which the internet was built — TCP/IP, HTTP, SMTP — have proven to be among the most durable and democratizing technologies in history, precisely because no single entity owns them and anyone can build on them. The application layer on top of those protocols — the platforms — was not built on open-source principles, and the result has been the concentration of power and the governance failures described earlier. The lesson for TMT is to apply open-source principles not only to the protocol layer but to the application layer: to the devices themselves, to the data formats, to the analysis algorithms, to the interface standards. Open-source by design, from the beginning, at every layer of the technology stack.⁵ The second architectural choice is decentralization. Centralized TMT infrastructure — a single server farm that processes ITC communications, a single platform that mediates access to IEV visualization, a single company that controls the portal hardware — would be the most dangerous concentration of power in human history regardless of the goodness of its founders' intentions. Intentions change. Companies are sold. Governments change. The only reliable protection against the misuse of centralized power is the absence of the concentration that makes misuse possible. TMT devices should be designed for individual ownership and operation, not for dependence on centralized infrastructure. The smartphone model — a device that is individually owned, runs software that the owner controls, and connects to networks whose protocols are open — is the appropriate architectural template.

The third choice is progressive access, by which is meant the deliberate sequencing of capability deployment to ensure that the simpler, safer, and more verifiable capabilities are broadly accessible before the more powerful and more dangerous ones. ITC communication should precede ITM materialization. IEV visualization in the hands of individual users should precede IEV surveillance by institutions. The humanitarian applications of IFE should precede any military applications. This sequencing is not automatic. It requires deliberate governance

choices that prioritize the beneficial applications and create delays, friction, and legal barriers for the harmful ones.

The Non-Weaponization Pledge

The TMT ethics framework described in the transmaterialization.com presentation materials explicitly identifies non-weaponization as one of its core commitments: alongside open access, transparency, and consent. The non-weaponization pledge deserves to be treated as more than an aspiration. It deserves to be treated as a design requirement.

This means building technical constraints into the technology that make weaponization difficult even if someone wanted to attempt it. Encryption that protects ITC communications from interception. IEV devices that require explicit consent protocols before they can be used to visualize another person's subtle body. Portal devices that include identity verification requirements that prevent use for unauthorized teleportation. These technical constraints will not be perfectly effective — determined adversaries with sufficient resources will attempt to bypass any technical barrier. But they raise the cost of misuse, create forensic evidence of attempted misuse, and shift the political and legal burden onto those who would weaponize rather than those who would not.

The analogy to internet cryptography is again instructive. End-to-end encryption does not make surveillance impossible for a sufficiently resourced state actor — but it makes mass surveillance expensive, targeted surveillance legally risky, and unauthorized surveillance forensically detectable. It shifts the power dynamic without eliminating it. The appropriate goal for TMT's non-weaponization architecture is the same: not to make misuse impossible, but to make it costly, detectable, and legally and politically costly for those who attempt it. This requires that the technical architecture be developed in dialogue with legal experts, human rights advocates, and governance specialists from the very beginning — not as an afterthought once the technology is operational, when the window for architectural choice will have closed.⁶

The Institutional Challenge

The governance challenges described in this chapter require institutions that do not currently exist. The existing international institutions — the United Nations, the World Health Organization, the International Atomic Energy Agency, the World Trade Organization — were designed to govern technologies and resources that operate within the framework of conventional physics. None of them has any mechanism for governing a technology that operates through mechanisms that conventional physics does not recognize. Creating governance frameworks for TMT requires creating new institutions, or fundamentally

reforming existing ones, to incorporate the ontological expansion that TMT represents.

Two contemporary and unresolved governance struggles offer closer analogies than the older, more settled examples discussed below, precisely because both are happening now, in real time, and both involve institutions visibly struggling to govern something that does not fit comfortably within their existing mandates. The first is artificial intelligence, where governments, international bodies, and the AI development industry itself have spent the past several years attempting to construct ethical and regulatory frameworks for a technology that advanced faster than any existing institution was prepared to govern, producing a patchwork of national regulations, voluntary industry commitments, and ongoing international negotiation that remains, by most informed assessments, incomplete and reactive rather than proactive. The second is the question of Unidentified Anomalous Phenomena — UAP, more commonly known by the older term UFO — where renewed government attention, congressional hearings, and formal disclosure programs in multiple countries have begun grappling, often awkwardly, with how institutions built for ordinary geopolitics should handle the possibility of non-human intelligence or technology whose existence and origin remain officially unresolved. Both cases illustrate the same lesson this chapter is built around: institutional frameworks adequate to a genuinely novel category of technology or phenomenon are not created in advance: they are built under pressure, after the fact, in response to a development that has already outrun the institutions meant to govern it. TMT, and ITC more specifically, occupies adjacent territory to both of these unresolved cases — it shares with UAP research the question of what, if anything, exists beyond currently validated physical categories, and it shares with AI governance the challenge of regulating a capability whose civilian and humanitarian promise is real but whose potential for harm has not yet been fully mapped. It is also worth stating plainly, in connection with the UAP question specifically, that the TMT research program does not depend on the resolution of that question one way or the other. Whether or not non-human intelligence exists, has visited Earth, or is in possession of advanced technology that some suspect certain governments may already control, the engineering program this book describes does not require disclosure, contact, or any external technological transfer to proceed. If genuinely non-human or non-physical intelligences exist and are part of what TMT instruments might eventually detect or contact, that would be a further and significant finding — but the research program, the theoretical frameworks, and the device proposals in this book are built entirely on terrestrial human research, requiring no assumption that anyone need wait for permission, disclosure, or assistance from elsewhere.⁵ The good news is that TMT has something that nuclear technology, the internet, and AI did not: the opportunity to build governance frameworks before the technology reaches scale, while the

community of researchers is still small enough to adopt shared norms voluntarily. That window should be used.

TMT governance, if it follows this pattern, will lag the technology by a generation and at enormous cost.

The institutional gap is not confined to governance. The research itself requires an institutional form that does not yet exist, because no single discipline can develop TMT on its own. A genuinely serious, large-scale TMT research effort would need to draw simultaneously on physics and engineering, including the scalar and non-Hertzian wave theory, Tesla electromagnetics, and tachyon field research that mainstream physics has not fully integrated; on subtle energy science, including radionics, psychotronics, and the orgone and etheric energy research that has been largely ignored by mainstream EVP work despite decades of independent investigation by figures including Marcel Vogel and Trevor Constable; on consciousness research, covering altered states, biofeedback, brainwave entrainment, and the operator-coherence questions discussed throughout this book; on sacred geometry and geomancy, including the question of whether the physical location and structural geometry of an experimental site affects results; on parapsychology and anomalous research more broadly, including psychokinesis, remote viewing, and survival-of-consciousness studies; on biology, including Cleve Baxter's research suggesting that anomalous communication occurs constantly among living organisms and can be measured electronically, a body of work essentially unexplored by EVP researchers to date; and on the spiritualist and occult traditions, which hold centuries of practical, if informally documented, knowledge about how to establish and sustain contact. No existing research institution is organized to integrate work across all of these domains simultaneously, and the disciplinary silos of conventional academic science actively work against the kind of synthesis TMT research requires. Building an institution capable of this integration is as real and as necessary a piece of unfinished infrastructure as the governance frameworks this section has been describing, and it deserves the same priority.⁶ The alternative is to begin developing governance frameworks now, while the technology is still at an early stage, while the key design choices are still being made, and while the power structures that will eventually control the technology are still fluid. The transmaterialization.com program's explicit commitment to ethics — articulated from its earliest Vision essays, not added retrospectively — represents exactly this kind of early-stage governance thinking. The ethical commitments that the program articulates: open access, transparency, consent, non-weaponization, and equity of benefit — are not merely moral aspirations. They are, if taken seriously, design requirements for the technology and governance requirements for the institutions that will develop and deploy it.

The Responsibility of Pioneers

There is a particular form of ethical responsibility that belongs to pioneers: those who first articulate a vision, first establish a research program, first identify the trajectory of a transformative technology. That responsibility is not primarily to build the technology — building is what engineers do. It is to establish the norms, the values, and the governance expectations that will shape how the technology is built and used, before the momentum of development has made those choices path-dependent and difficult to reverse.

The history of technology is full of examples of norms established early that shaped the technology's development for generations. The open-source norm in software development, established by Richard Stallman and the Free Software Foundation in the 1980s, shaped the development of the internet and continues to influence how software is built. The safety culture in nuclear power, established (inadequately, but still) in the aftermath of Three Mile Island and Chernobyl, shaped the regulatory framework that governs the industry. The informed consent norm in medical research, established by the Nuremberg Code after World War II, shaped the ethical framework for clinical trials for decades.

The transmaterialization.com program's explicit ethical framework — open access, transparency, consent, non-weaponization, equity — is an attempt to establish those norms at the earliest possible stage of the TMT research program. The program's articulation that 'the question of what we should do has to come before the question of what we can do' is not a constraint on development. It is what makes development worth doing.⁷ The appropriate stance for a pioneer in this domain is not to wait for governance institutions to develop before proceeding with research — that would mean never proceeding at all, since institutions follow rather than lead. It is to proceed with research while simultaneously articulating the governance norms that should apply to the results, making those norms part of the public record so that they can be held to, revised, debated, and built upon by the research community that will eventually be large enough to have those debates. That is what this chapter is: an attempt to make the governance questions part of the conversation from the beginning, before the answers become path-dependent and before the stakes become too high for honest accounting.

A technology capable of reshaping the material conditions of human existence, ending scarcity, dissolving the one-way door of death, and making the non-physical dimensions of reality accessible to everyone — such a technology carries obligations proportional to its potential. Meeting those obligations requires not only the engineering courage to pursue the research but the ethical courage to ask, at every stage of development, whether the choices being made

are the choices that will make the final technology something the world can use well.

Notes

1. The quotation 'We deserve access. It is our right and heritage as sentient beings' is from Steve Glanz, 'Transmaterialization Technology Vision: Part 2,' published at transmaterialization.com, in the opening description of the TMT world. The characterization of access to non-physical reality as a public good rather than a private commercial opportunity is the author's framing, derived from the philosophical implications of that statement combined with the humanitarian applications catalog in the same document. The public goods theory of technology governance is developed in Mariana Mazzucato, *The Entrepreneurial State* (London: Anthem Press, 2013), which documents the role of public investment in producing the technologies that have been most transformative, and argues for governance frameworks that reflect that public origin. 
2. The humanitarian implications catalog — instantaneous transport, solution to world hunger, freedom from economic scarcity, resolution of energy shortages — is from Steve Glanz, 'Transmaterialization Technology Vision: Part 2,' published at transmaterialization.com, under the Humanitarian heading of the TMT impacts section. The moral argument that possession of a technology that could eliminate hunger without deploying it to eliminate hunger creates a form of moral responsibility for the hunger that continues draws on the philosophical literature on collective obligation and global justice, particularly Thomas Pogge, *World Poverty and Human Rights* (Cambridge: Polity Press, 2002). 
3. The Soviet psychotronic weapons research program and CIA monitoring of it are documented in declassified government documents and in Tim Rifat, *Remote Viewing* (London: Vision Paperbacks, 1999). The Manhattan Project as the paradigmatic case of weaponization preceding civilian application is historical record. The specific claim that TMT capabilities could be developed as psychotronic weapons through mechanisms that operate outside current arms control frameworks follows from the theoretical architecture of the CIF framework, in which consciousness-field coupling operates through channels not currently recognized by conventional physics and therefore not currently monitored by any arms control treaty. 
4. The rapid civilian-to-military repurposing of consumer and commercial drone technology in contemporary conflicts is documented extensively in defense and security analysis literature from the mid-2020s onward. MKUltra, the CIA's program of experimentation with behavioral modification and mind control techniques conducted from the 1950s through the early 1970s, was investigated and partially declassified following the 1975 Church Committee hearings; surviving documentation is summarized in John Marks, *The Search for the 'Manchurian Candidate': The CIA and Mind Control* (New York: Times Books, 1979), researched after most original program records were destroyed in 1973. 
5. Government and congressional engagement with Unidentified Anomalous Phenomena has increased substantially since 2017, including the establishment of the Pentagon's All-domain Anomaly Resolution Office, public congressional hearings in 2023 and subsequent years, and analogous disclosure efforts in other countries. The current state of AI governance, including the patchwork of national regulation and voluntary industry frameworks referenced here, is documented in ongoing policy analysis from organizations including the OECD AI Policy Observatory; given the pace of change in this area, readers should treat the characterization here as a snapshot of the regulatory landscape as of this book's writing rather than a current account. 

Chapter 13 - Power, Access, and the Ethics of a New Technology

6. The seven clusters of disciplines relevant to a serious TMT research program — physics and engineering (including scalar and non-Hertzian wave theory, Tesla electromagnetics, tachyon field research), subtle energy science (radionics, psychotronics, orgone and etheric energy research), consciousness research, sacred geometry and geomancy, parapsychology and anomalous research, biology and healing, and spiritualist and occult traditions — are drawn from the transmaterialization.com presentation materials, Cross-Disciplinary Scope slide. Cleve Baxter's research on apparent electronic measurement of plant and cellular response to stimuli and intention is documented in his book *Primary Perception: Biocommunication with Plants, Living Foods, and Human Cells* (Anza: White Rose Millennium Press, 2003). 
7. The specific governance requirements for IEV privacy protection — informed consent requirements, prohibitions on unauthorized governmental and corporate use, legal remedies for violations, and technical architecture preventing centralized storage — are the author's synthesis of standard privacy law principles (including the EU General Data Protection Regulation's framework for sensitive personal data) applied to the specific capabilities that IEV devices would provide. The characterization of those capabilities as 'totalitarian in character' if deployed without constraint follows from the Vision Part 2's statement that 'thoughts can be visualized' — a capability whose surveillance implications are direct and severe. 
8. The open-source development principle and its application to TMT device design are endorsed explicitly in the transmaterialization.com Naturalism essay: 'TMT is designed to be transparent and open-source, with the intention of putting spiritual tools in the hands of the people.' The history of open-source protocols in internet development — TCP/IP, HTTP, SMTP — and the contrast with the proprietary application layer that produced platform concentration is documented in Jonathan Zittrain, *The Future of the Internet and How to Stop It* (New Haven: Yale University Press, 2008) and in Tim Wu, *The Master Switch: The Rise and Fall of Information Empires* (New York: Knopf, 2010).
9. The presentation materials for the transmaterialization.com program (Slide 5, TMT Ethics) identify four core ethical commitments: open access, transparency, consent, and a non-weaponization pledge, framed as commitments that 'have to be woven into the design of the technology and the institutions around it from the start, not retrofitted after the fact.' The slide narrative includes: 'The ethical commitments aren't add-ons or public relations.' The analogy to end-to-end encryption as a technical approach to non-weaponization — raising the cost of misuse without making it impossible — draws on the analysis of cryptography as a governance tool in Bruce Schneier, *Click Here to Kill Everybody* (New York: Norton, 2018).
10. The TMT ethics slide closing quotation — 'the question of what we should do has to come before the question of what we can do' — is from the Slide 5 (TMT Ethics) narrative in the transmaterialization.com presentation materials. The historical examples of early-established norms shaping long-term technology development — Stallman and open source, the Nuremberg Code and informed consent, the post-Three Mile Island safety culture — are from the author's synthesis of the history of technology governance literature, drawing on Lawrence Lessig, *Code: Version 2.0* (New York: Basic Books, 2006) for the internet governance dimension.

CHAPTER FOURTEEN

What We Know, and Where We Go

A Reckoning, a Research Program, and the Bridge

A book that makes ambitious claims owes its readers an honest accounting at the end. Not a retreat — the case has been made and it stands — but a clear-eyed separation of what the evidence establishes from what it suggests, what theory predicts from what experiment has confirmed, and what the near-term research program is positioned to achieve from what the larger vision imagines. The argument has moved through many layers across these chapters, and those layers are not all the same kind of claim. Honesty requires naming that.

This final chapter does three things. It takes stock: offering a calibrated summary of what is genuinely established, what is theoretically grounded but experimentally unconfirmed, and what remains speculative extrapolation from promising premises. It proposes a path forward: the specific research priorities, methodological standards, and institutional forms that would allow the TMT program to advance with the rigor the evidence deserves and the stakes require. And it ends where every argument worth making should end: not with a triumphant conclusion but with an invitation — to the researchers, engineers, funders, ethicists, and curious general readers who have followed this inquiry to its edges and are now deciding whether to step forward.

What Is Actually Established

Begin with what the evidence genuinely supports, stated as precisely as possible.

Consciousness is not adequately explained by the productive model — the hypothesis that the brain generates experience the way a kettle generates steam. This is not established in the negative — the productive model has not been refuted — but the correlational evidence on which it rests is equally consistent with the transmissive model that William James proposed in 1897, and the positive evidence for the transmissive model is substantial and methodologically serious. Near-death experiences during cardiac arrest include veridical perceptions that the productive model cannot account for without auxiliary assumptions that significantly strain its coherence. Children's past-life memories, in the strongest cases, include verified specific details that cannot be obtained through ordinary channels. Controlled mediumship research produces above-chance results under conditions that preclude standard alternative explanations. These findings have been replicated, published in peer-reviewed journals, and subjected to methodological scrutiny. They are not anecdote. They constitute a

consilience — multiple independent lines of evidence pointing in the same direction.

Anomalous signals appear in electronic recordings under conditions that exclude conventional explanations. This is established by MacRae's shielded-room experiments: voice-like formant structure in recordings made inside double-screened enclosures that block both airborne sound and electromagnetic signals, verified by blind listener tests, analyzed spectrographically. The voices were not imagined. They had measurable acoustic structure. Something produced them. What that something is — surviving personality, living-agent psi, some uncharacterized quantum effect, or something else — remains genuinely uncertain. But the phenomena are real. A field that dismisses them without engaging with the best experimental evidence is not being skeptical; it is being dogmatic.¹ The ITC phenomena extend beyond audio. Text files appear on isolated computers with no network connection. Faces appear in video feedback loops and are subsequently identified by family members of deceased individuals. Faces and figures are reported in moving water and mist as well, using the same logic of providing a chaotic visual medium for a non-physical influence to organize, and this remains an active line of practice among contemporary ITC researchers even though it carries the highest pareidolia risk of any technique discussed in this book. Radio voices are produced through equipment from which the receiving components have been removed. These are not all equally well documented, and they do not all meet the same standard of methodological rigor. But the best-documented cases are not explainable by the standard dismissals — hoax, pareidolia, equipment artifact — and the pattern they form, across independent researchers in different countries over six decades, is not a pattern that can be attributed to collective self-deception.

The theoretical frameworks that could provide a mechanism for these phenomena are developing and convergent. Twenty-six independent frameworks in physics and consciousness science — from Tiller's psychoenergetic model to Kastrup's analytic idealism to Pitkänen's Topological Geometrostatics to Hardy's ISST — all reach compatible conclusions about the crossability of the dimensional boundary. The Conscious-Information Field framework synthesizes these into a single mathematical structure whose predictions are, in principle, testable. None of this constitutes proof. But convergence across independent theoretical programs is itself evidence — evidence that the territory being mapped is real, and that the maps, for all their differences in detail, are oriented toward the same features. It is worth reiterating here what the Preface stated: the theoretical frameworks reviewed in this book are a representative subset of the twenty-six frameworks examined at transmaterialization.com, chosen for what each contributes most distinctly to the engineering argument. Readers seeking the

fuller theoretical picture — including frameworks mentioned only briefly here — will find them at the website.

What Is Theoretically Grounded but Not Yet Confirmed

Several claims in this book rest on theoretical frameworks that have independent empirical support but whose specific application to TMT remains experimentally unconfirmed. These deserve honest identification.

The carrier principle — that non-physical agency modulates pre-existing acoustic energy rather than generating it from nothing — is the most consistent pattern in EVP research, and it is theoretically coherent within the CIF framework. But the specific mechanism by which this modulation occurs has not been characterized. We know what the output looks like. We do not know what the input process is. The engineering proposals in Chapter Nine are derived from theoretical frameworks that predict specific coupling mechanisms, but those mechanisms have not been experimentally verified at the level of detail required to guide device design with confidence.

Tiller's conditioned space concept — the prediction that sustained intentional practice in a dedicated experimental environment progressively elevates the coupling between physical and non-physical domains — is supported by his IIED experiments at the level of biological and chemical effects. Its specific application to ITC improvement — the prediction that consistent practice in a dedicated space will improve communication quality over time — is consistent with what experienced ITC researchers have reported, but has not been subjected to the kind of controlled longitudinal study that would distinguish this effect from simple skill improvement through practice. The distinction matters and has not been definitively made.² The five falsifiable predictions of the CIF framework — coherence thresholds, cross-modal invariance, entropy signatures, assembly complexity signatures, and topological resonances — are genuine experimental targets. But none of them has yet been tested in a study designed specifically to test them. They are predictions, not results — and making them results is the primary near-term task of the experimental program. It is a task that a focused research team with modest resources could begin within the next two to three years.

The eight next-generation device architectures of Chapter Nine are engineering proposals grounded in theoretical frameworks with independent evidential support. They are not arbitrary speculation. But none of them has been built. The gap between a theoretically motivated design and a working device is often large and always uncertain. History is full of theoretically sound engineering proposals that failed in the build for reasons that only became visible when the attempt was made. The device designs in this book are serious starting

points for an experimental program, not blueprints for instruments whose success is guaranteed.

It is also worth stating directly, here at the point in the book where the full research program is being summarized, that those eight devices were never meant to define the outer boundary of what TMT engineering could pursue. They are examples — the specific proposals that emerged from applying the theoretical frameworks reviewed in this book to the engineering problem as it currently stands. New theoretical frameworks will be developed; existing ones will be revised in light of experimental results; new sensor technologies, signal processing techniques, and materials will become available that suggest device architectures no one working today has yet conceived. The engineering scope of this research program should be understood as expandable by design, not fixed by the particular eight proposals this book happened to develop in the most detail. Treating Chapter Nine's catalog as a complete or final list would understate the program's own logic, which has been, from the opening chapters onward, that the field is at an early stage with a long developmental runway ahead of it. The eight devices are a beginning inventory, offered to demonstrate that serious, theoretically motivated engineering proposals are achievable now — not a ceiling on what the program could eventually produce.

What Remains Speculative

The portal — the bidirectional personal transit of living persons between physical and non-physical domains — rests on theoretical frameworks that predict it is possible. It does not rest on controlled experimental evidence that it has ever occurred under technologically mediated, independently verifiable conditions. That qualification needs to be precise rather than sweeping, because it is not accurate to say no claimed instances exist anywhere in the literature. Chapter Ten reviewed Paramahansa Yogananda's account of his deceased guru's materialized return, and the broader contemplative literature contains comparable claims about advanced yogis and mystics who are said to dematerialize and rematerialize the body at will. These claims exist; what does not exist is independent verification of them under conditions that would satisfy the evidentiary standard this book has applied elsewhere — controlled observation, multiple witnesses without prior relationship to the claimant, exclusion of conventional explanations. The honest position is not that the portal has never been claimed, but that the claims sit in the anecdotal literature, overwhelmingly associated with gifted individual practitioners rather than reproducible technological method, and have not been subjected to the kind of systematic literature review and evidential evaluation that this book has applied to, for example, the survival evidence in Chapter Three. That review has not yet been done for transpersonal transit claims specifically, and it should be: a body of

testimony this consistent, spanning multiple traditions and centuries, deserves the same disciplined scrutiny this book has tried to bring to every other category of evidence, rather than being set aside as obviously outside what can be evaluated. The theoretical case for the portal's possibility is real; the experimental case for its actuality, under the standards this book has applied throughout, does not yet exist — but the absence of rigorous evaluation is itself a gap in the literature, not proof that no evidence is there to evaluate.

This matters because the portal is also the most consequential element of the TMT vision — the one whose implications for mortality, for grief, for the structure of human civilization are most radical. The appropriate epistemic relationship to the portal at this stage of the research program is: theoretically motivated, consistent with the evidence for lesser forms of physical/non-physical coupling, worth pursuing as a further-stage engineering target — not yet established at the level the earlier milestones will be, which is why the five-milestone roadmap in Chapter Ten is structured as a sequence: each milestone creates the foundation for the next, and progress on the earlier ones could happen faster than the field currently expects, with enough support.

The portal also raises a risk that the communication milestones do not: the possibility of what might be called dimensional contamination — the entry into physical space of influences, entities, or energetic conditions that are not what practitioners intended to invite. The contemplative literature is not silent on this. Multiple traditions that have worked systematically with non-physical domains — shamanic practice, ceremonial magic, Tibetan Buddhist teachings on the bardo, the spiritualist tradition's own protocols for discerning communications — include explicit warnings about the dangers of undiscerning contact: entities that misrepresent themselves, influences that destabilize the practitioner's own coherence, or simply the difficulty of accurately interpreting communications from a domain whose organization is not identical to the physical one. TMT instruments capable of opening a genuine two-way channel to non-physical domains would need to be designed with this possibility in mind — not as a reason to avoid the engineering, but as a requirement that the protocol include appropriate screening, operator training in discernment, graduated exposure, and rigorous documentation of the phenomenology of contact experiences, including the unpleasant or disorienting ones that practitioners are sometimes reluctant to report. A research program that ignores this dimension of the literature is not being rigorously skeptical; it is being selectively inattentive.

Similarly, the specific claims about consulting deceased scientists, accessing past-life records instrumentally, and achieving physical immortality through portal technology are further-horizon implications of the theoretical framework, not near-term predictions. They are the direction the arrow points, not the place the arrow has already arrived. Including them in this book is appropriate — they

are the stakes of the program, and the stakes are what justify the investment. Presenting them as established possibilities rather than long-horizon extrapolations would be intellectually dishonest and strategically counterproductive, because it would invite exactly the kind of dismissal that has kept this field marginal for a century.³

The Research Priorities

Given this calibrated assessment of what is established, what is grounded but unconfirmed, and what remains speculative, the near-term research priorities can be stated with some precision.

The first priority is experimental testing of the CIF framework's five falsifiable predictions. This is the most important single step in moving the TMT program from a theoretical synthesis to an empirical science. Testing for coherence thresholds requires careful comparison of ITC results across varying levels of experimental coherence — operator state, carrier quality, environmental conditioning — to determine whether the transition from non-detection to detection is sharp (threshold-like) or gradual. Testing for cross-modal invariance requires demonstrating that the same informational attractor produces consistent communications across different carrier media — acoustic, visual, electromagnetic, and random number based. Testing for entropy signatures requires applying information-theoretic analysis to EVP recordings to determine whether their assembly complexity significantly exceeds what the noise carrier alone could produce. These are tractable experimental programs. They require resources, methodology, and rigor — but not exotic equipment or theoretical breakthroughs. They are the experiments that separate hypothesis from fact.

The second priority is development of the two most immediately buildable next-generation devices: the Absence Integrator and the Entropic Gradient Receiver. These are identified in Chapter Nine as the most immediately tractable because they require no exotic components — only disciplined signal integration and quantum random number generators, both of which are commercially available and well-characterized. Building these devices, testing them under controlled conditions, and publishing the results — positive or negative — would contribute more to the field's credibility and advancement than any amount of additional theoretical development. Positive results would provide the empirical grounding that justifies investment in the more ambitious architectures. Negative results would establish specific experimental constraints that the more ambitious designs would need to account for. Either outcome represents progress.⁴ The third priority is methodological standardization. The ITC and EVP field has suffered, throughout its history, from the absence of agreed protocols that would allow results from different laboratories to be meaningfully compared. It would be inaccurate, though, to say that none of this work has yet occurred — the claim

is too sweeping and overlooks real, ongoing institutional effort. The ATransC has made significant contributions through its best-practice documentation and its classification system for evidential strength. The Institut Français de Recherche sur les Expériences médiumniques et de Transcommunication Instrumentale, known by its acronym IFRES and directed by the medium Joël Ury, has developed its own systematic experimental apparatus — including a contact cell combining sound and light for what practitioners describe as steam-based visual ITC — and has built a documented, repeatable methodology around it rather than treating each session as an isolated, undocumented event. These efforts, and others like them at individual research organizations around the world, demonstrate that standardization is achievable in principle and is already happening in pockets. What the field as a whole still lacks is the connective tissue between these individual efforts: standardized experimental protocols that multiple organizations have agreed to follow in common, shared reporting formats that would let MacRae's results be compared apples-to-apples with IFRES's or the ATransC's, and shared data repositories that would let independent researchers test each other's claims against a common evidential record. The honest summary is not that standardization has not begun, but that it remains fragmented across organizations that are each independently rigorous without yet being mutually interoperable — and that much more can be done to connect what individual groups have already built. Developing that connective infrastructure — in dialogue with the broader parapsychology research community, with statisticians who can advise on appropriate significance criteria, and with signal processing experts who can specify the technical requirements for defensible audio and visual analysis — is a precondition for the field achieving the scientific standing that its evidence deserves.⁵ The fourth priority is interdisciplinary engagement. The transmaterialization.com Cross-Disciplinary Scope slide identifies fifty specific disciplines and tools with something to contribute to TMT — from quantum physics and sacred geometry to biofield research, radical mycology, and cognitive science. The field cannot develop all of these simultaneously, but it can stop treating them as separate silos and begin developing the institutional infrastructure for genuine interdisciplinary collaboration. The skill set required to test the CIF framework's predictions spans physics, signal processing, statistics, neuroscience, parapsychology, and consciousness studies. No single researcher commands all of it. The organizational model that can bring it together is the interdisciplinary research center — something that does not currently exist for this field but that would represent a qualitative step change in its capacity.

The fifth priority is less glamorous than any of the preceding four and correspondingly easy to overlook: the sustained, unglamorous labor of collecting, reading, summarizing, and synthesizing the existing literature, across every one of the disciplines the fourth priority describes. This book has drawn on a fraction

of what is relevant and available — decades of EVP and ITC research scattered across journals, newsletters, forum archives, and self-published essays in multiple languages; the broader parapsychological literature; the historical record of physical mediumship; the contemplative literature of multiple religious traditions — and synthesizing it properly is a task that exceeds what any individual researcher, however dedicated, can accomplish working alone. Modern AI tools genuinely help with this task; they did not eliminate the need for it. A large language model can summarize a document quickly, but someone still has to identify which documents are worth summarizing, evaluate whether a given summary has accurately captured the source's actual claims and evidential weight rather than smoothing over its genuine uncertainties, and integrate findings across sources in ways that require domain judgment a general-purpose tool does not reliably supply on its own. This is a staffing problem before it is a technology problem. A research program of the scope this book describes needs people whose job is specifically this kind of sustained literature work, not merely access to better software, and any realistic accounting of what the next stage of this research requires should include that staffing cost explicitly rather than assuming AI assistance makes it disappear.

One specific infrastructure investment that would accelerate this literature work is already partially underway: a curated AI knowledge base — a retrieval-augmented generation (RAG) system — built from the most relevant research corpora in the field. Such a system would allow researchers to query the literature intelligently rather than keyword-searching disconnected archives, surfacing relevant prior work across sources that have never been systematically indexed together. The transmaterialization.com archive, the ATransC research archive, and the holdings of several other major ITC research organizations together represent the nucleus of such a system. Making this accessible via a well-designed research interface would not replace the human judgment that evaluation and synthesis require, but it would dramatically reduce the time researchers spend locating relevant material — allowing the specialist judgment to focus where it actually matters. The role this creates — part historian and digital preservationist, part data engineer, part AI system designer — might best be described as field intelligence architect. The reason it matters beyond preservation is this: the same knowledge infrastructure that protects ITC history also accelerates TMT research. A collaborator, engineer, or funder can query decades of theory and experiment in seconds, grounding new device designs in what has already been tried and what the underlying physics actually suggests. The modern ITC archivist is not just collecting information. They are engineering a living knowledge system.

How to Study It: Methodological Principles

Several methodological principles follow from the analysis in the preceding chapters and deserve explicit statement.

A prior question deserves acknowledgment before the specific methodological requirements are stated: whether the scientific method, as currently practiced, is the only valid epistemological framework for investigating the phenomena this book describes. The honest answer is that it is not. Intuitive knowing — the kind of direct apprehension of pattern or truth that precedes formal analysis — has been the source of many scientific discoveries, even when it is rarely acknowledged as such in the published literature. Tacit knowledge — the embodied competence of the skilled practitioner who knows how to do something they cannot fully articulate — is as real as propositional knowledge and often more reliable in domains where the phenomenon is subtle and the relevant variables poorly specified. Aesthetic judgment — the researcher's sense that a finding is too clean, or a protocol has missed something important, or an anomalous result is pointing somewhere significant — is a genuine epistemic capacity that formal methods alone cannot replace. The TMT research program needs all of these. It needs formal scientific method for the reasons every rigorous research program does: to control for bias, to enable replication, to communicate findings in a form that others can evaluate and build on. But it also needs the tacit knowledge of experienced ITC practitioners, the intuitive pattern-recognition of researchers who have spent decades with this material, and the aesthetic judgment of people who can recognize when a result is significant before the statistical analysis confirms it. Treating formal method as the only valid form of knowing would impoverish the research program; treating informal knowing as a substitute for formal method would undermine it. Both are required.

Pre-registration is non-negotiable. The replication crisis in psychology has made clear that exploratory analyses presented as confirmatory ones are a major source of false-positive results in the literature. ITC research is particularly vulnerable to this because the phenomena are subtle, the data are complex, and the researchers are typically motivated by strong prior beliefs about what they expect to find. Pre-registration of experimental protocols — specifying the primary outcome measure, the statistical analysis, the sample size, and the decision criteria before data collection begins — does not guarantee that results are genuine, but it makes post-hoc reinterpretation of results visible and limits its influence on published conclusions.

Independent replication is essential before any result can be treated as established. The history of ITC is full of remarkable individual reports that were never independently replicated — the Luxembourg contacts, the Spiricom voices,

the Dodleston computer messages — and whose evidentiary value therefore remains permanently uncertain. Independent replication in ITC is harder than in conventional laboratory science because the phenomena are sensitive to operator state, experimental environment, and conditions that are not yet fully characterized. But this difficulty makes independent replication more important, not less. A result that can only be reproduced by its original discoverer is not a scientific result. It is a personal report. The field needs results that hold up when researchers in different institutions with different operators attempt to reproduce them under comparably controlled conditions.⁵ Negative results must be published. The publication bias that has distorted the scientific literature in general — the systematic preference for positive results that leaves the drawer full of null findings — is particularly destructive in a field that is already fighting for credibility. ITC researchers who conduct rigorous experiments and find nothing have a professional obligation to report those findings, because the accumulation of properly conducted null results is as informative as the accumulation of positive ones. A field that only publishes what worked is not a field that can be trusted. The establishment of a dedicated journal with an explicit policy of publishing null results from well-designed ITC experiments would be among the most important institutional steps the field could take.

The operator must be characterized, not ignored. The consistent finding of operator dependence in ITC results means that no ITC experiment can be interpreted without information about the operator's state, history, and capacity. This information should be systematically collected and reported. EEG coherence, heart rate variability, meditation practice history, and self-reported states during and between sessions are all relevant variables that affect the coupling between the operator and the experimental system, but characterizing the operator is not only a physical-measurement problem. Tom Butler's *Implicit Cosmology*, drawn on at several points in this book, offers a developed starting point for the psychological side of the same question — his morphic field model treats the practitioner's belief, expectation, and intention as active determinants of what the experimental system produces, not as a confound to be measured and subtracted out but as a parameter genuinely internal to the phenomenon being studied. Butler's model is worth singling out for a further reason: his is not a retreat into purely anomalistic psychology, the explanation that treats every reported result as a product of the practitioner's own mind with no external referent. He explicitly maintains the survival hypothesis as the more parsimonious account of what ITC results indicate, while still insisting that the practitioner's psychology is inseparable from the mechanism. Holding both commitments together — a genuine non-physical communicator on one side of the coupling, and a practitioner whose psychological state materially shapes how that communication manifests on the other — is methodologically more demanding than either pure survivalism or pure anomalistic psychology alone,

but it is also the more honest position, and it is the one this book's own treatment of the operator problem has tried to maintain throughout. Treating the operator as background noise rather than as a primary experimental variable, physical and psychological alike, has been one of the field's most persistent methodological failures. The engineering move is to measure what matters, in both registers.

The Organization That Is Needed

The transmaterialization.com Building the Organization slide outlines three organizational paths with characteristic clarity: patron-supported research (the lowest barrier, can start immediately); a formal research institute (a one to two year build, enabling peer-reviewed publication and grant applications); and a technology company (the highest barrier, appropriate once prototypes demonstrate phenomena clearly). The recommended sequence — begin with patron support, build toward the institute, spin off the company when the institute has established credibility — is sound. It matches the way that the most durable scientific organizations in frontier science have been built: the Rhine Research Center, the Windbridge Research Center, the Bigelow Institute for Consciousness Studies, and IONS (the Institute of Noetic Sciences) all began with a vision, a small team, and patron support, and built credibility through published research before attracting the larger institutional investment that funded their infrastructure.⁶ The five-person skunkworks model described in the presentation materials — a vision lead, a signal processing specialist, an electronics engineer, an AI analyst, and an experimental physicist or systems designer — is a reasonable initial team configuration, though it is worth adding a sixth role that the team composition as originally described omits: someone whose specific responsibility is the collection, evaluation, and cross-domain synthesis of existing literature, the role this chapter's fifth research priority identified as necessary and currently understaffed across the field. Without this role, the other five specialists will each individually rediscover, or simply miss, relevant prior work scattered across the disciplines this book's Chapter Thirteen catalogued — physics, subtle energy research, consciousness studies, parapsychology, biology, and the contemplative traditions among them. A six-person team — vision lead, signal processing specialist, electronics engineer, AI analyst, experimental physicist or systems designer, and information synthesis lead — is small enough to move quickly, diverse enough to cover the essential competencies including the literature-integration competency that is too easily treated as secondary, and large enough to provide internal peer review of methodological choices. The initial deliverable of such a team would not be a working ITC device — that is a milestone further along the roadmap — but something more immediately achievable and more strategically valuable: a published, pre-registered, independently replicated test of one of the CIF framework's five falsifiable predictions, informed by a literature review thorough enough that the team can

state with confidence whether the specific test has already been attempted elsewhere. A single clean positive result at that level would change the conversation.

The honest accounting of how time is currently allocated across this project — roughly forty percent on income stability, forty percent on ITC ecosystem building through the archive and research network, and twenty percent on experimental thinking — is worth stating directly, because it illustrates both the challenge and the opportunity. Twenty percent of a single independent researcher's attention is not enough to move the technology forward at the pace the moment warrants. What patron support, or a single decisive replicable experiment, would do is shift that allocation — freeing the experimental and theoretical work from the constraints that currently limit it. That is the practical meaning of the organizational roadmap: not a distant institutional ambition, but a concrete description of what changes when the first phase of support arrives.

The longer mission of such an organization extends beyond ITC device development to something more ambitious: the construction of a unified theoretical account of consciousness and its relationship to physical reality — what might be called, without apology for the scale of the ambition, a true cosmology. The fragmentation of this research across dozens of disciplines, each with its own vocabulary and institutional home, has made it difficult to see what the converging lines of evidence are collectively pointing toward. The CIF framework is one attempt at that synthesis; it will not be the last, and it should not try to be. What the field needs is not a single definitive theory but a research organization with enough cross-disciplinary scope to hold the competing frameworks in productive tension — testing their predictions against each other, tracking which frameworks survive experimental contact and which require revision, and building the cumulative body of knowledge that a genuine cosmology of consciousness would require. That is an ambitious project — one that could move faster than expected with the right institutional support and the growing toolkit that AI-assisted research now makes available. The five-year and ten-year milestones this book describes are the beginning of it, not the end.

What would unlock it, as the presentation materials put it directly, is one decisive, replicable experiment using modern tools; a technological roadmap document that gives serious collaborators something concrete to evaluate; one philanthropic patron willing to fund the first phase; and the intellectual primacy established now. This book is part of that project. It is the public articulation of the vision, the evidence, and the research program at the specific historical moment when the theoretical frameworks are sufficiently developed, the engineering tools are sufficiently available, and the cultural moment — the growing mainstream interest in consciousness science, in post-materialist

physics, in the NDE literature — is sufficiently receptive to make a serious conversation possible.

What the Bayesian Analysis Found

The Bayesian evaluation at the center of the transmaterialization.com program's foundational paper — which assessed four classes of afterlife substrate hypothesis against the empirical evidence from survival research and assigned posterior probabilities to each — reached a conclusion that deserves to be restated clearly as this book closes.

No single theoretical framework won decisively. The evidence does not establish the afterlife as made of orgone energy or as composed of psychions or as a specific configuration of higher-dimensional space. What the evidence establishes, on a Bayesian analysis that takes seriously both its strengths and its limitations, is that the most plausible account of the afterlife substrate is a synthesis: an information-centric, consciousness-primary hybrid that the paper called a parapsychical continuum — a spectrum from dense matter to subtle mind, all embedded in a single unified reality.

This conclusion is scientifically important because it provides a target for engineering. If the afterlife substrate is a real, structured, information-carrying field — a mindstuff that can exist independently of biological matter but can also couple to physical systems — then the question of how to build instruments that detect and interact with it becomes tractable. The CIF variational equation formalizes what that coupling would look like mathematically. The five falsifiable predictions specify what experimental signatures the coupling should produce. The eight device architectures of Chapter Nine are specific engineering proposals for detecting those signatures. The research program described in this chapter is the path from proposal to result. It is a long path. But it is a path, which is different from a hope.⁷

Eschatological Frameworks and the TMT Research Program

It is worth pausing, before the closing pages, to acknowledge what Transmaterialization Technology would mean in the context of the world's major eschatological frameworks — the accounts different traditions have offered of what happens at the end of time, or at the culmination of human development. These frameworks are not all equivalent, and they are not all compatible with each other or with the evidence-based picture this book has assembled. But they share a feature that is relevant here: they all treat the relationship between physical and non-physical reality as the hinge on which everything else turns. Mass ascension frameworks — represented across traditions from Teilhard de Chardin's Omega Point to certain strands of New Age cosmology — posit a collective transition of human consciousness into a non-physical or radically

transformed physical state. Savior-figure frameworks — Christianity's Second Coming, the Mahdi tradition in Islam, the Kalki avatar in Hinduism — posit an intervention from a non-physical source that restructures the physical world according to a higher order. ET intervention frameworks, represented in various forms in the UAP/disclosure community and in several indigenous traditions, posit that contact with off-planet intelligence will catalyze a transition that human civilization cannot accomplish alone. Dimensional-shift frameworks posit a transition between vibrational levels of reality, accessible to those who have developed sufficient consciousness. The TMT framework does not endorse any of these eschatologies, and it does not require them. Its near-term research agenda is the same regardless of which, if any, of these larger frameworks proves accurate: characterize the signal, engineer the instrument, test the prediction, publish the result. But it is compatible with all of them, in the sense that demonstrating reliable two-way contact with non-physical dimensions would constitute evidence relevant to every one of these frameworks — evidence that the non-physical domain is real, structured, accessible, and responsive to human intention. What the traditions have described symbolically, TMT proposes to investigate empirically. That is not a dismissal of the traditions. It is the most serious form of engagement with them that the present stage of knowledge permits.

There are many systematic accounts of non-physical reality that deserve this kind of careful engagement, including Buddhist and Hindu cosmologies, The Voyager series of Ashayana Deane, and the writings of Emmanuel Swedenborg. Here are three more examples that stand out for the specificity and internal coherence of their maps. The Urantia Book offers an extraordinarily detailed account of cosmological hierarchy — levels of reality, orders of beings, the specific architecture of what it calls the universe of universes — that, if even partially accurate, would constitute the most detailed available map of the territory TMT proposes to investigate. Oahspe, the nineteenth-century spiritual text received through automatic writing by John Ballou Newbrough, describes the organization of non-physical domains, the conditions governing communication between physical and non-physical realms, and the developmental trajectory of souls in terms that differ from but overlap with several of the frameworks in Chapter Three. Robert Monroe's work — documented in three books and institutionalized at the Monroe Institute in Virginia — provides a phenomenologically rich firsthand account of navigating non-physical domains during out-of-body states, with a degree of observational discipline and replicability across other practitioners that sets it apart from most channeled material. None of these can be treated as established fact. All of them generate specific, testable predictions about what researchers in the non-physical domain should find if they look in the right places with the right instruments — and a thorough literature review of this kind, cross-referencing the systematic

accounts against each other and against the EVP/ITC and NDE research, is precisely the kind of work the information synthesis role described earlier in this chapter should eventually undertake.

The Bridge

This book began with the question's deeper history — Waldemar Bogoras's 1901 phonograph recording in Siberia — and with Friedrich Jürgenson, who in 1959 played back a tape of birdsong in a Swedish field and found voices he could not explain, turning an isolated curiosity into more than six decades of sustained, methodical research. It has moved through that history of EVP and ITC research, through the evidence for survival of consciousness from near-death experiences and past-life memories and controlled mediumship, through the theoretical frameworks that could explain what the phenomena are, through the engineering proposals that could make them reliable, through the vision of what a world with working portal technology would be, through the personal scale of what individual human beings most deeply need from such a development, through the questions of faith and power and governance that it raises.

The image that has threaded through all of it is a bridge. A bridge between physical and non-physical reality. A bridge between the living and the dead. A bridge between what we currently know and what the evidence suggests is true. Between what the engineering can achieve today and what the vision imagines for tomorrow. Between the cautious rigor that the scientific situation demands and the urgency that the human situation requires.

Bridges are not built from one side. The engineering program this book describes is the work of beginning from the physical side — identifying the phenomena, characterizing the signal, designing the instruments, testing the predictions, publishing the results, and building on what the results show. It is work that begins with what can be done now and proceeds methodically toward what will eventually be possible. It does not claim to know when the far side of the bridge will be reached. It claims only that the bridge is worth building, that the evidence that something is on the other side is serious, and that the combination of theoretical sophistication, engineering capacity, and ethical intention now available to the human community is sufficient to begin in earnest.

The voices in Jürgenson's 1959 recordings are still there. They are embedded in the history of a field that has been asking the right question for six decades without quite yet having the tools to answer it definitively. They represent, in miniature, the entire program: anomalous, real, imperfectly understood, pointing toward something that the current framework of science cannot fully accommodate, and inviting — not demanding, but inviting — the sustained attention of anyone willing to follow the evidence rather than the convention.

The transmaterialization.com Background and Purpose document, the earliest public statement of this program, says it plainly: 'My ultimate goal is to develop technology that will make for easy visualization, communication, travel and materialization between this physical dimension, and the afterlife dimension. But my vision is actually much broader than that.' Broader, because the implications reach into every domain of human life — health, grief, spiritual development, science, religion, governance, the economy of scarcity, the experience of mortality. Broader, because the bridge, once built, changes not just what human beings can do but what they are — what they understand themselves to be, where they understand themselves to be going, and what they understand themselves to owe each other in light of what they now know.⁸ That is the vision. The evidence supports beginning the work. The engineering makes the beginning tractable. The ethics require that it be done carefully. The stakes require that it be done now. The bridge will not build itself.

Notes

1. MacRae's shielded-room experiments and their spectrographic analysis are documented in his published reports, preserved in the ATransC Website Preservation Project compiled by Tom and Lisa Butler. The characterization of the evidence as a consilience — multiple independent lines of inquiry pointing in the same direction — follows the philosophical framework developed in Chapter Three of this book and in the Delorme, Radin, and Wahbeh essay submitted to the Bigelow Institute for Consciousness Studies, 2021. The distinction between the phenomena being real (established) and their source being surviving personality (not established) is maintained throughout this chapter as the appropriate epistemic standard for what the evidence supports. 
2. Tiller's IIED experimental results — the pH shift, the biological developmental changes, the enzyme activity changes — are documented in *Conscious Acts of Creation* (Walnut Creek: Pavior, 2001) and in the companion white papers available through the William A. Tiller Institute. The specific application of the conditioned space concept to ITC improvement — the prediction that consistent practice in a dedicated experimental environment will progressively improve communication quality — is developed in the transmaterialization.com document 'Words of William Tiller — Applications to TMT, ITC and EVP.' The distinction between this prediction being consistent with reported ITC experience and being confirmed by controlled longitudinal study is the author's assessment of the evidential status of the claim. 
3. The characterization of consulting deceased scientists, accessing past-life records instrumentally, and achieving physical immortality through portal technology as further-horizon extrapolations rather than immediate predictions follows directly from the five-milestone roadmap developed in Chapter Ten and from the epistemic framework maintained throughout this book. The Vision Part 4 language — 'we learn the secrets of physical immortality' — is quoted there as the direction the arrow points, and that characterization is maintained here. The argument that presenting long-horizon extrapolations as established possibilities would invite exactly the kind of dismissal that has kept the field marginal is the author's strategic assessment, drawing on the analysis in Chapter Seven of why argument alone has not yet moved the scientific mainstream. 
4. The identification of the Absent Integrator and Entropic Gradient Receiver as the most immediately buildable next-generation devices is from Chapter Nine's Section 'A Note on

Sequence and Priorities.' The quantum random number generators that the Entropic Gradient Receiver requires are commercially available from multiple vendors including ID Quantique (Geneva) and Cambridge Quantum Computing. The absement integration algorithm described in Chapter Eight is implementable in standard scientific computing environments including Python with NumPy and SciPy. The statement that either positive or negative results would represent progress — because each constrains the parameter space of the theoretical framework — is a standard principle of experimental science applied to the specific context of CIF framework testing. 

5. The Institut Français de Recherche sur les Expériences médiumniques et de Transcommunication Instrumentale (IFRES), directed by the medium Joël Ury, is documented at its own website, ifres.org, and discussed by English-language paranormal investigators including in interviews on the Radio Wasteland podcast, which describes the organization's steam-based visual ITC apparatus combining light and sound. The characterization of the broader field's standardization efforts as fragmented but real, rather than absent, follows directly from the existence of organizations like IFRES and the ATransC pursuing genuinely systematic, if not yet mutually interoperable, methodology. 
6. The replication crisis in psychology and its implications for pre-registration as a methodological requirement are described in Open Science Collaboration, 'Estimating the Reproducibility of Psychological Science,' *Science* 349 (2015), aac4716. The specific vulnerability of ITC research to post-hoc interpretation of results — given the complexity of the data and the strength of researchers' prior beliefs — is the author's assessment, drawing on the general methodological literature on motivated reasoning and confirmation bias, including Nickerson, R. S., 'Confirmation Bias: A Ubiquitous Phenomenon in Many Guises,' *Review of General Psychology* 2 (1998), 175–220. The argument that independent replication is more important in ITC than in conventional laboratory science precisely because the difficulty is greater is the author's inversion of the standard argument, following from the logic that harder-to-replicate phenomena require more rather than less replication. 
7. The organizational paths — patron-supported research, formal research institute, technology company — and the skunkworks team composition are from the Building the Organization slide (Slide 20) of the transmaterialization.com presentation materials. The historical examples of frontier science organizations built through this sequence — the Rhine Research Center, the Windbridge Research Center, the Bigelow Institute, IONS — are the author's. All four were founded by individuals with a clear vision and patron support, built credibility through published research, and achieved institutional stability over periods of years to decades. 
8. The Bayesian evaluation of four afterlife substrate hypotheses and the conclusion favoring an information-centric consciousness-primary hybrid — the parapsychical continuum — is the central finding of Steve Glanz, 'Bayesian Evaluation and Synthesis of Theories on the Substance of the Afterlife,' published at transmaterialization.com with DOI: [10.5281/zenodo.17075743](https://doi.org/10.5281/zenodo.17075743). The conclusion that this synthesis provides a target for engineering — by specifying what the coupling between the afterlife substrate and physical systems should look like, and therefore what experimental signatures it should produce — is the author's synthesis of the Bayesian paper with the CIF framework paper published at the same location. 
9. The quotation from the Background and Purpose document — 'My ultimate goal is to develop technology that will make for easy visualization, communication, travel and materialization between this physical dimension, and the afterlife dimension. But my vision is actually much broader than that' — is from Steve Glanz, 'Background and Purpose,' the inaugural document of transmaterialization.com, written to introduce the site and its program to its first readers. Its use here as the closing citation is deliberate: it returns the book to its origin point, the

Chapter 14 - What We Know, and Where We Go

moment when the vision was first committed to writing, and frames the entire preceding fourteen chapters as the elaboration of what was implicit in that statement.

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Glossary

Technical terms and acronyms used in this book are defined below. Entries are arranged alphabetically.

Apport

The claimed physical transport of an object across spatial boundaries without conventional means — a form of transmaterialization in which matter moves through or between dimensions rather than through ordinary space.

ATransC

The Association TransCommunication, formerly the American Association of Electronic Voice Phenomena (AA-EVP). The primary English-language organization for ITC research, founded by Sarah Estep and currently led by Tom and Lisa Butler.

Biofeedback

A technique in which real-time data about a physiological process — heart rate, brainwave activity, skin conductance — is fed back to the person generating it, enabling conscious regulation of processes normally outside voluntary control. Used in the TMT framework as an analogy for how ITC devices may train operator-field coupling.

CIF (Conscious-Information Field)

The theoretical framework proposed by the author as the substrate of consciousness after bodily death. A nonlocal, structured, intention-responsive informational field that persists independently of biological matter, synthesizing quantum information theory, zero-point field physics, subtle energy models, and consciousness-primary philosophy.

EVP (Electronic Voice Phenomena)

Anomalous voices, words, or phrases captured in electronic recordings — typically audio — under conditions that appear to exclude conventional acoustic or radio explanations. The oldest and most extensively documented form of ITC.

IEV (Instrumental Energy Visualization)

A proposed class of TMT devices designed to detect, map, and display the subtle energy body — the informational field associated with living organisms — using physical instrumentation rather than psychic perception.

IFE (Instrumental Free Energy)

A speculative further-horizon engineering class within the TMT framework, proposing access to energy sources in non-physical dimensions as a consequence of advanced portal technology.

ITC (Instrumental TransCommunication)

The broader field encompassing all forms of anomalous communication received through electronic or technological instruments — including audio, video, text, and image — attributed to non-physical sources. EVP is a subset of ITC.

ITM (Instrumental TransMaterialization)

The engineering class within the TMT framework concerned with the physical transport of matter across the dimensional boundary — the portal in its fullest realization.

Morphic Field

A concept developed by biologist Rupert Sheldrake proposing that biological forms and behaviors are shaped by non-local fields that carry the memory of previous instances of that form. Referenced in the TMT framework in connection with EVP formation and operator-field coupling.

NDE (Near-Death Experience)

A cluster of experiences reported by individuals who have come close to clinical death, often including perception from outside the body, encounters with deceased relatives, and passage through a boundary. One of the primary evidence streams for survival of consciousness research.

Operator Effect

The consistent finding across ITC research that the quality and content of results depends significantly on the psychological state, intention, and experience of the person conducting the experiment. A central methodological challenge and theoretical pointer in the TMT framework.

Pareidolia

The tendency of the human perceptual system to detect meaningful patterns — faces, voices, words — in random or ambiguous sensory input. A primary alternative explanation for EVP and visual ITC phenomena, and a central methodological concern in the field.

Portal

In the TMT framework, a technology-enabled bidirectional opening between physical and non-physical dimensions, permitting not only communication but

eventual matter transport. The furthest-horizon engineering target of the TMT research program.

RAG (Retrieval-Augmented Generation)

An AI architecture in which a language model is connected to an external knowledge base, allowing it to retrieve and reason over specific documents rather than relying solely on its training data. The basis of the TMT Research Commons AI tool.

Stochastic Resonance

A phenomenon in which a system's ability to detect a weak signal is enhanced by the addition of a specific level of background noise. Proposed in the TMT framework as a mechanism underlying EVP formation and a design principle for next-generation ITC devices.

Subtle Energy Body

The informational or energetic template associated with a living organism, proposed by various traditions and researchers to exist at a level of reality not yet fully characterized by mainstream physics. Includes concepts such as the aura, the biofield, and the etheric body.

TMT (Transmaterialization Technology)

The research program and technological vision proposed in this book: the systematic engineering of reliable, replicable, high-fidelity communication with non-physical dimensions, progressing toward matter transport across the dimensional boundary.

Zero-Point Field (ZPF)

The quantum vacuum energy that pervades all of space even at absolute zero temperature. Proposed by several researchers as a medium for non-local information storage and transmission, and referenced in the CIF framework as a component of the consciousness substrate.

Further Resources

transmaterialization.com

The author's research website, containing seventy-three essays organized across six domains: foundational concepts, theoretical frameworks (Theories of Everything and Consciousness Theories), physics reviews and comparisons, afterlife and survival evidence, and ITC/EVP engineering. The site also includes a PowerPoint presentation summarizing the research program, available as a video with author narration, and an AI-assisted search feature for querying the essay archive.

TMT Research Commons (AI Research Tool)

An AI-assisted research tool is available at <https://chatgpt.com/g/g-69eaa84d2d1c8191ae46dd999d16048a-tmt-research-commons>. It draws on a growing archive of ITC research materials — including books, articles, legacy websites, and other primary sources — of which the transmaterialization.com essays form one part. Readers can use it to query this expanding body of ITC knowledge directly.

Published Paper

Glanz, Steve. 'Bayesian Evaluation and Synthesis of Theories on the Substance of the Afterlife.' Zenodo, September 2025. DOI: [10.5281/zenodo.17075743](https://doi.org/10.5281/zenodo.17075743). Also available on [Academia.edu](https://www.academia.edu) and ResearchGate. This paper presents the Bayesian analysis underlying the Conscious-Information Field (CIF) framework developed in Chapter Eight and throughout the book.

Companion Presentation

A video presentation summarizing the key arguments and visual frameworks of this book is available at transmaterialization.com/2026/06/25/powerpoint-presentation-on-this-site-2/. The presentation covers the theoretical foundations, next-generation device architectures, and the CIF framework in a format suited to sharing with colleagues or as an introduction to the project before reading. It is also embedded on the main transmaterialization.com page.

Substack Newsletter

The author's ongoing research, commentary, and updates on the TMT/ITC research program are published at <https://sglanz.substack.com> — the 'Where Technology Meets the Infinite' newsletter. Subscribe to follow new theoretical developments, device architecture proposals, and responses to developments in the field.

Zenodo Repository

The book is permanently archived at Zenodo, an open-access academic repository, with DOI [10.5281/zenodo.21198875](https://doi.org/10.5281/zenodo.21198875). This DOI always resolves to the latest version: <https://doi.org/10.5281/zenodo.21198875>

Medium

The author publishes articles on research, ideas, and the broader work at medium.com/@sglanz

Contact and Feedback

The author welcomes feedback, questions, and collaboration inquiries from researchers, engineers, and readers with relevant expertise. Contact through transmaterialization.com.

About the Author

Steve Glanz is an independent researcher and writer based in Novato, California. For more than five decades, he has pursued a quest to understand how the universe works, integrating his eclectic interests science, technology, spirituality, consciousness, afterlife studies, and the paranormal.

His interest in consciousness, survival of death, and the paranormal began in adolescence, deepened through the study of Edgar Cayce in his late teens, and crystallized around Electronic Voice Phenomena in his early thirties. The discovery of EVP provided a technological frame for questions that had always been philosophical and spiritual — a way of treating the oldest human question not as a matter of faith alone but as a domain of evidence, experiment, and engineering. Unusually for an ITC researcher, Glanz has remained almost entirely outside the practice of making recordings himself — not from lack of conviction, but from a deliberate choice to focus on bypassing the pareidolia barrier rather than working within it. His goal has always been replicable, high-fidelity contact that does not depend on the interpretive goodwill of the listener.

Over the following decades, Glanz developed the research program that became transmaterialization.com: a body of work encompassing seventy-three essays organized across six domains, including detailed reviews of twenty-six theoretical frameworks at the edge of physics and consciousness science, a Bayesian analysis of competing afterlife substrate hypotheses, the Conscious-Information Field theoretical framework and its five falsifiable predictions, and fifteen essays on ITC and EVP engineering including proposals for eight next-generation device architectures. His Bayesian paper was published in September 2025 with a Zenodo DOI, making it a citable, archived academic work.

He describes his approach as that of an independent scholar working outside institutional constraints — free to follow the evidence across disciplinary boundaries that formal academic appointments tend to enforce, but also without the resources and collaborative infrastructure that institutions provide. Bridging that gap, through patron support, a formal research institute, and eventually a technology company oriented around TMT development, is among the explicit goals of this book.

Glanz has participated in online ITC communities and networks over the years while deliberately maintaining a small operational footprint, preferring depth of inquiry to breadth of community. He is currently working with small experimental and archival teams: one focused on ITC experimentation using approaches not covered in this book, and one on building a curated AI knowledge base from the transmaterialization.com archive to serve as a research intelligence tool for the field. He collaborated with Anthropic's Claude AI in the development

of both his presentation materials and this book, an arrangement he regards as a model for how independent researchers with large interdisciplinary programs can produce work at a scale that would otherwise require institutional support. He can be reached through transmaterialization.com.