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CRYPTOLOGICAL SOCIOLINGUISTICS

Foundations, Method, and Frontier of a Science of the Ciphered Message in Social Discourse

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First edition, 2026

ISBN: [pending]

Printed in Mexico

To those who have chosen the mission
of understanding the hidden.

"The secret does not reside in the system,
but in the key."

— Auguste Kerckhoffs, *La Cryptographie Militaire* (1883)

"Secrecy is one of the greatest achievements
of humanity."

— Georg Simmel, *The Sociology of Secrecy* (1906)

Contents

Part I

The Problem: Messages Within Messages

CHAPTER 1

The Hidden Message in the Plain Message

There is a scene we all remember, even if we cannot quite name it.

Two adults are talking in the kitchen. The children play nearby. At some moment, one of the adults says a phrase in a slightly different tone —not shouted, not whispered, but with a barely perceptible weight that makes the other adult nod without looking up. The phrase, seen from outside, says nothing extraordinary: *"we'll see how this goes,"* or *"there is time for everything,"* or *"it depends on how Sunday turns out."* The children don't know what happened. But they know something happened. They know that the phrase meant one thing for them —nothing, apparent continuity— and another thing for the adults: something specific, loaded with shared reference.

That domestic scene is the starting point of this book.

Because that mechanism —a single utterance that reaches two different audiences differently, with one of them convinced that nothing is going on, while the other decodes a specific message— is, in its most elementary form, the phenomenon that **cryptological sociolinguistics** proposes to study. And that phenomenon, when we take it out of the

family kitchen and move it into political discourse, digital platforms, international diplomacy, organized groups of power, becomes one of the least visible and most influential engines of contemporary public life.

This is not a new phenomenon. Humanity has spent millennia coding messages for specific audiences, shielding them with a literal alibi, distributing meaning into layers that open for some and remain closed for others. What is new is three things: scale, speed, and visibility. Scale, because today a coded message can reach hundreds of millions of people in hours. Speed, because codes are born, spread, and die within a single weekly news cycle. Visibility, because much of what previously circulated in lodges, cabinets, or ciphered after-dinner conversations now occurs in plain sight: in a hashtag, in a televised speech, in an official communiqué that anyone can read. The contemporary paradox is that social coding operates in full daylight and nevertheless remains, for most of the general audience, invisible.

Cryptological sociolinguistics is a proposal for doing something with that paradox.

Let us start with four scenes.

First Scene: The Slogan That Separates

The United States, late 1960s. A presidential candidate travels through the Southern states. In his speeches he repeats a phrase: *"law and order."*

For half the country, that phrase means what it appears to mean: the defense of public order, the authority of the State, respect for the law. A politically moderate, defensible stance, with a long genealogy in both the conservative and the liberal tradition. For the other half of the country —and very specifically, for Southern white voters recently displaced by federal civil-rights legislation, by the racial integration of schools, by the legal dismantling of the segregationist system— the phrase means something very different. For that specific audience, it means *"we are going to stop this."* It means that the question of "the law" is reframed as the question of *which law*, and that the question of "order" is reframed as the question of *which order*. The phrase offers, behind its neutral surface, a commitment to restoration.

Both readings coexist. Both audiences feel correctly addressed. And the candidate, if ever confronted about the racial reading, has a perfect answer: *"I spoke of law and order; that is what I said; if you interpreted something else, that is your problem."*

That mechanism has a name in the specialized literature: *dog-whistle*. A sound one audience hears clearly and the other does not hear at all, even though both are in the same room. The political scientist Ian Haney López, in his book *Dog Whistle Politics*, has meticulously documented how this device runs through half a century of American politics: from the campaigns of Barry Goldwater and Richard Nixon to, with variations, the rhetoric of the present. The psychological experimentation of Tali Mendelberg, in *The Race Card*, has further shown that these codes can produce measurable behavioral effects in the in-

tended audience without the general audience even registering that it has heard a racial message.

What interests this book's analysis, however, is not to morally judge the sender or to disqualify the audience. What interests us is the structure. A phrase with a defensible surface. Two audiences with different decoding keys. A sender protected by plausible deniability. That structure will repeat —as a pattern— with multiple variations, in all the other cases we will see.

Second Scene: The Recipe That Is Not a Recipe

Any city, 2020. A TikTok user posts a video in which, while preparing pasta, she says into the camera: *"if anyone is thinking about unaliving themselves tonight, please reach out, call this number."*

Unalive is not a word. It does not exist in the dictionaries. Any attentive reader would notice it is an artificial construction: a privative prefix attached to a vital adjective to produce, by negation, an impossible verb. But for millions of young users of the platform, *unalive* is transparent: it means *to commit suicide*, or sometimes, in the context of video games, *to kill a character*. The word is born for a specific and verifiable reason: TikTok's moderation algorithms penalize —reduce visibility, demonetize, and sometimes outright remove— any video containing the word *suicide*. The result is predictable: the community develops a substitute. The substitute works because humans understand it and algorithms, at least for a while, do not.

The same mechanism generates dozens of parallel substitutions: *seggs* for *sex*, *corn* for *porn*, *le dollar bean* (in syllabic jargon) for *lesbian*, *pew-pew* for *gun*, *yt* for *white*, *mascara* for *murder*. Each substitution is a small piece of linguistic engineering: it must be phonetically close enough for the human to read without effort, semantically ambiguous enough for the algorithm to classify it as innocuous, and culturally legible enough for the intended community to adopt it.

Unalive is a case of *algospeak* —language designed to evade algorithms. It is fast, disposable, collective, alive. The sociologist Tarleton Gillespie, in *Custodians of the Internet*, has analyzed how digital platforms function as *custodians* that moderate at scale; the anthropologist Sarah T. Roberts, in *Behind the Screen*, has documented the invisible human labor that complements —and at times corrects— that algorithmic moderation. What is relevant for us is that *algospeak* stages, with unusual clarity, a structure of coding: there is a sender, a message with a dual layer, a human audience that decodes, an algorithmic audience that does not. When the moderation models learn to detect *unalive*, another word will be born. When they learn to detect that one, another. The community and the algorithm enter into an evolutionary relationship from which language remains as a deposit —a deposit that cryptological sociolinguistics can study, corpus in hand, layer by layer.

It is worth noting, from the outset, something that will return in later chapters: this phenomenon is not as new as it looks. Young people, in every society, have coded their language against the language of adults. Generational *slang* precedes *algospeak* by centuries. What

the algorithm adds is not the mechanism —the mechanism is millennia old— but the speed of the evolutionary cycle and the asymmetry of the adversary: it is no longer the distracted adult; it is the algorithm model that learns.

Third Scene: The Ambiguous Communiqué

June of any recent year. A ministry of foreign affairs publishes a three-paragraph communiqué about a border incident with a neighboring country. The text speaks of *"the importance of the established diplomatic channels," "unrestricted respect for the agreements in force,"* and *"confidence that the situation will be resolved in accordance with international law."*

Three audiences read the same communiqué.

The domestic audience —the citizens of the emitting country— reads prudence and firmness. A sober political class, a State that does not rush. The allied audience —a third country with shared interests— reads a tacit signal that this incident will not escalate but does require support: the mention of "established channels" functions as a sign that bilateral contacts are already active. The adversary audience —the neighboring country— reads a veiled warning, sustained in the invocation of international law: the communiqué, without threatening, announces that there is a possible legal claim underway.

None of the three readings is false. None contradicts the text. The text is written, precisely, so that none would. This is not accidental: it is **diplomatic craft**, and it is one of the oldest and most refined

cases of social coding in public language. Formal diplomacy has spent centuries producing texts whose ambiguity is not a defect but an architecture: every adverb has weight, every order of mention means something, every silence is as eloquent as every assertion. Diplomats, foreign-policy analysts, and intelligence services spend their professional lives reading these layers. The average citizen of the emitting country passes over them without registering them.

Consider Cold War diplomacy. Joint communiqués between superpowers were read simultaneously by at least four audiences: the domestic public of each signer, the allies of each bloc, the non-aligned countries, and the counterpart itself. A different adjective, a notable omission, an altered order in a list of cited countries: all of this was message. The historian Thomas Rid, in *Active Measures*, traces the genealogy of these information operations. Diplomacy is not the only source; the same phenomenon appears clearly in central bank communications, in corporate merger announcements, in union strike declarations. Any official language becomes, over time, a system of social coding refined by use.

Fourth Scene: The Symbol That Crosses the Threshold

An international corporate event, recorded and broadcast to millions. At a certain moment, a speaker makes a hand gesture. A minimal gesture, technically banal. For most spectators —almost all of them— the gesture means nothing. For a small subset, educated in certain sym-

bolic traditions, the gesture is recognizable: it belongs to an esoteric repertoire documented for centuries.

Here is where we must pause for a moment, because this book has with esotericism a specific relationship that is worth clarifying from the first page.

Esotericism does not enter this treatise as occultist curiosity or as the object of paranoid denunciation. It enters because esoteric repertoires —hermetic symbols, Masonic iconographies, systems of hermeneutic correspondence, ritual gestures— have been, historically, **instrumentalized by groups of power** to encode belonging, hierarchy, and signaling. Not always. Not necessarily. But with sufficient frequency that cryptological sociolinguistics (CSS hereafter) cannot ignore the phenomenon without becoming blind to a substantial part of its object.[1] Masonic iconography is in the architecture of capitals, in state seals, in corporate logos. That does not, in itself, mean there is a conspiracy; it means there is a language visible only to a portion of the audience. CSS wants to be able to speak of this without falling into the vices of the two extremes: neither the totalizing reading that sees code in every shadow, nor the formalist blindness that denies the phenomenon because it does not fit the comfortable frames of academic discussion.

Here we will not pronounce on the internal validity of esoteric knowledge. We will not say whether Hermeticism is true or false,

[1] The acronym **CSS** preserves the author's original Spanish abbreviation (*Criptología Sociolingüística*) and is used throughout this book. Readers should not confuse it with the unrelated acronym *Cascading Style Sheets* familiar from web development; context will make the intended meaning clear.

whether Freemasonry is benign or malevolent, whether there exists or not a *hidden order of the world*. That is not CSS's business. What is CSS's business is what happens when a symbol born in an initiatic context **crosses the threshold** and appears in the public space, where a part of the audience recognizes it and another part does not. That threshold crossing is, formally, the same phenomenon as the *dog-whistle*, the *algospeak*, and the diplomatic communiqué. It is a *message within a message*.

The reader coming from a strict rationalist sensibility may feel uneasy here. *"Are we not opening the door to paranoid readings?"* they might ask. This book's answer is: only if we forget the method. CSS does not consist in finding esoteric symbols wherever they might seem to appear; it consists in formulating specific hypotheses, building paired corpora, measuring differential readings across audiences, documenting negative cases, publishing the refutations. If we do it well, the inclusion of esoteric material does not open the doors to paranoia: it closes them. Because it places every supposed finding under the same evidential demands as any other.

The Common Structure

The four scenes are very different from one another. The first is an electoral slogan; the second is an improvised platform vocabulary; the third is a millennia-old exercise of official language; the fourth is a symbol with ancient history in contemporary use. But they share a common structure. In all four, **one and the same surface of language**

produces different readings in different audiences, and at least one of the audiences does not know —or does not perceive— that it is receiving a particular reading. In all four, the sender keeps an alibi: if questioned, he can defend the literal reading.

Let us look at this structure more closely. It has four features that will reappear, named and defined, throughout the book:

1. **Differential reading.** Two or more audiences, exposed to the same message, produce systematically different interpretations. It is not that one audience "understands" and another "does not understand"; it is that each audience accesses a coherent reading, but the readings are not the same.

2. **Plausible deniability.** The sender retains the possibility of publicly defending the literal reading. The message is designed — or has evolved— to shield the sender against the accusation of having said something specific.

3. **Hide effect.** The coded layer remains, in large measure, *non-conscious* for the general audience. It is not that the general audience knows there is a code and cannot decipher it; it is that, in many cases, the general audience does not even suspect there is a code.

4. **Relevant intentionality (conscious or unconscious).** There is a purpose in the coding. It may be deliberate and calculated, as in a well-designed political campaign; it may be habitual and semi-automatic, as in diplomatic rituals; it may be emergent and collective, as in *algo-speak*. But it is not random.

Those four features —differential reading, plausible deniability, hide effect, relevant intentionality— are, in raw form, the demarcation

criteria of CSS. The entire book will do nothing else than refine them, operationalize them, test them, and, where appropriate, qualify them.

The Thesis

That common structure is what gives cryptological sociolinguistics its reason for being. The book the reader holds in hand attempts to do four things with it. To found the discipline as an autonomous field —distinct from endolinguistics, from the oracular traditions, from hermeneutics without limits. To build an adequate conceptual language, cautiously borrowing the metaphors of mathematical cryptography: that of sender and receiver, that of symmetric and asymmetric encryption, that of steganography, that of the side channel. To catalog the great families of social codes that circulate today: *dog-whistles*, plausible deniability, *algospeak*, Aesopian language, cryptolects, covert signaling. And to lay out a method for studying them with rigor, without falling into paranoia or overreading.

The thesis that runs through the entire book can be stated in a single sentence:

> **Every social message belongs, at least in part, to two economies: that of what is said, and that of what is transmitted without being said.**

The two economies are real. Each has its own rules. The first is the economy of literal meaning, of the explicit, of what can be quoted within quotation marks without betraying the sender. That economy is the one handled by traditional discourse analysis, by the press, by

the courts, by the school. The second is the economy of the unsaid, of what is transmitted below the surface, of what plays out in implicatures, tones, omissions, frames, historical associations, whistles. That second economy —less visible but no less real— is what, in many of the most decisive phenomena of our public life, truly matters.

CSS studies the second economy. Not because the first is disposable —it is the necessary ground— but because the second has been left, historically, without a discipline that takes it seriously with tools of its own. Endolinguistics, pragmatics, semiotics, discourse analysis, the sociology of secrecy: all those disciplines brush up against the phenomenon, but none addresses it with the specific combination this book proposes. Filling that gap is the contribution of cryptological sociolinguistics.

An Invitation to the Reader

This is not a book of denunciation. It is not a manual of conspiracy theories. It is not a guide for suspecting everything. It is, on the contrary, an attempt to **reduce the power of the hidden over the less powerful** —offering conceptual tools for separating, with order, what is real code from what is only ambiguity, coincidence, style, or clumsiness.

It is worth pausing on that phrase. "Reducing the power of the hidden over the less powerful." It is a political and ethical wager, not merely an academic one. Social codes do not distribute their effects symmetrically. A racial *dog-whistle* does not affect the comfortable voter the same way it affects the stigmatized group. An evasion *algos-*

peak does not affect the person who has other platforms the same way it affects the person who does not. An ambiguous diplomatic communiqué does not affect the trained analyst the same way it affects the migrant for whom the border closes. An esoteric coding used by groups of power does not affect the person inside the circle the same way it affects the person outside. The phenomenon of social coding is, among other things, a mechanism for the asymmetric distribution of information. Those who have the key —those who are inside— have more world at their disposal. Those who do not —those who are outside— live governed by messages they never quite come to understand.

CSS does not pretend to fully neutralize that asymmetry. Human communication is, to some irreducible extent, a layered practice. There will always be codes. There will always be in-groups and out-groups. There will always be messages within messages. What CSS aspires to is that, at the very least, anyone who wants to look at the codes should have a method for doing so. That the difference between the expert and the layperson in ciphered reading should cease to be an initiatic privilege and become an accessible tool. That the work of clarification —traditionally reserved for diplomats, analysts, intelligence services, and other specialized professions— can be done, at least in part, by a citizen with curiosity and patience.

The task is neither easy nor wholly pleasant. Whoever starts to look at the codes is exposed to two symmetrical temptations. The first is to see codes everywhere, to fall into totalizing reading, to find coordination where there is only coincidence. That is the conspiratorial

slope. The second is to refuse to see any codes, to take refuge in literal reading as if it were complete reading, to declare that "words mean what they say" and close the problem. That is the formalist slope, equally mistaken. The book will try, in each chapter, to hold the edge between the two temptations. Because that edge is, in fact, where the discipline lives.

The book assumes that the reader need not be an expert. It assumes that each reader has, at some point, taken part in a scene like the kitchen one with which this chapter opened. And it assumes that this experience is enough to understand the rest.

Over the pages that follow, we will learn three things.

First, why a discipline already existed —**endolinguistics**— that is not sufficient to study these phenomena, and why we need a parallel discipline. That is the work of Chapter 2.

Second, why it is important not to confuse what we do here with the work of oracular or esoteric systems, even when we share with them an interest in the hidden. That is the work of Chapter 3, where we will introduce the notion —central to the entire book— of the **threshold between the esoteric and the exoteric**.

Third, how to build, step by step, a hypothesis of social coding that can be tested and —crucially— refuted. That will be the work of Chapter 4, and it will be put to the test throughout Parts III, IV, and V before being formalized in the methodological protocol of Part VI.

But all of this will come in the chapters that follow. For now, it is enough to stay with the opening scene: two adults in the kitchen, some children who do not quite understand, and a phrase that said

something and did not say it at the same time. That domestic gesture, so familiar that we hardly see it, is the elementary gesture of the phenomenon to which this book devotes three hundred pages of illumination. Scaled up to an electoral campaign, it becomes politics. Scaled up to a digital platform, it becomes algorithm. Scaled up to a cabinet, it becomes diplomacy. Scaled up to a secret group, it becomes ritual. But at all those scales, under all those forms, the same elementary structure operates.

That is the terrain we are going to map.

CHAPTER 2

From Endolinguistics to Cryptological Sociolinguistics (CSS)

This book has an origin that is less philosophical than anecdotal.

Some time ago I was working with a colleague on questions of structural linguistics. He was studying the deep consonantal codes of the *endolanguage*, that level of human language where words that appear entirely foreign to one another turn out, under comparative phonetic and semantic examination, to share binary or ternary structures consistent across entire language families. One day, in an apparently casual conversation, he began to apply the same conceptual apparatus —consonantal structures, presymbolic kinships, macrosystemic regularities— to a contemporary political slogan. He said, in substance, that the social effect of that slogan *could be explained* by the consonantal ternary that organized it, because that ternary activated, in the listener, a shared structural depth.

I stopped. Something in that transition did not sound right, and it took me several months to articulate why. The deep consonantal

structure he studied is real; the political slogan exists and has social effect; the proposed explanation connected the two with a straight line. And yet that straight line was wrong. It was conflating two distinct levels of language —one structural and stable, the other pragmatic and conjunctural—, treating them as if they were the same, and ending up by weakening both the discipline he had cultivated for years and any possibility of understanding, with rigor, what the slogan did socially.

That recurrent error —committed by a serious researcher, and committed in good faith— was the seed of this book. From it come two tasks that hold each other up. The first is **to protect endolinguistics** from uses that stretch it beyond its legitimate domain and, by doing so, discredit or trivialize it. The second is **to propose a parallel discipline** —cryptological sociolinguistics— that gives an adequate frame for the study of the social phenomena of coding that endolinguistics must not take on.

In this chapter we will describe, as clearly as possible, what endolinguistics is; where its boundary lies; why the temptation to cross that boundary is so persistent; and what discipline appears, on the other side, to receive what falls outside it.

What Endolinguistics Is

Endolinguistics is a discipline that studies what we might call the **informational layer** of human language. Just as beneath the screen of a device there is an invisible level of processing that organizes the entire visible experience, beneath the surface of any natural language there

is —on this hypothesis— a level of structural organization that is invisible but systematic. It is not merely the unconscious in the Freudian sense, especially in its linguistic aspect, nor a universal grammar in the Chomskyan sense; it is a deep consonantal architecture that connects apparently unrelated words and that functions as a silent ground of meaning.

In the Indo-Iranian-European linguistic system —which is the best-documented macrosystem to date— endolinguistics identifies seven abstract consonantal groupings with similar organizing functions across the languages of the group:[1]

- **M** (labial nasal).
- **N** (any nasal other than M).
- **P = B = F = V** (labials other than M and N).
- **T = D = TH** (coronal stops and non-sibilant fricatives).
- **S** (sibilant fricatives).
- **R = L** (laterals and rhotics).
- **K = G = H** (laryngeals, dorsal stops).

These seven groupings are neither exotic nor arbitrary. Any linguist will recognize in them, under other names, the phonetic classes that

[1] We use the form *Indo-Iranian-European* rather than the conventional *Indo-European* to avoid a eurocentric framing of the macrosystem and to keep visible the Aryan bridge —the Iranian-Indian linguistic continuity— as a fundamental criterion for the system's study.

appear in nearly all descriptions of the world's sound systems. What is specific to endolinguistics is not the discovery of these classes —they have been known for a century and a half— but showing that they combine among themselves in **stable binary and ternary patterns** that cut across multiple languages of the macrosystem and organize deep semantic families.

An important clarification here, because it affects everything that follows. The letters with which we name these groupings —M, N, P, T, S, R, L, K— are neither graphemes nor the concrete sounds of any particular word. They are abbreviations of **OAS classes** (*Originating Affective Sound*), the abstract units out of which binaries and ternaries are formed. Although these classes are represented with consonants for notational convenience, they are not reducible to them: they are something more profound, the elementary pieces of a code that the endolinguist *models* from the phonetic material of words but that does not reside *in* that material. When one studies the origin of a binary, or when one analyzes how the insertion of a new element enters a binary and turns it into a ternary, the discipline resorts precisely to these finer articulatory classifications; the OAS classes are what allows the ternaries to be studied with greater depth.

Two planes must therefore be distinguished with care. A real word —*cálido*, *kalt*, *calidarium*— has concrete consonants in the language that contains it, and from those consonants the endolinguist **models** the underlying code. But the consonants of any particular word **are not** the code. The code is an **object shared across the languages of a macrosystem**: it does not belong to any single language

or to any single word. The consonants of *cálido* are concrete material of Spanish; the K-L-D ternary to which they contribute is an abstract structure of the entire Indo-Iranian-European macrosystem, visible only when multiple languages and lexical families are compared. The concrete word is the surface from which the analyst accesses the code; the code lives one level above, in the shared system.

A binary, in this vocabulary, is a pair of consonantal classes that appears systematically in words related by a single semantic constellation. The F-L binary, for example, appears in words tied to filiation and to affection: *filos*, *filia*, *fille*, *filial*, *familia*, *flame* (in its amorous sense), with kinships stretching from classical Greek to contemporary languages. These are not cognates in the strict etymological sense; they are a structural coherence underlying lexical groups that are genealogically dispersed but functionally consistent. Endolinguistics does not work directly with genealogies or etymologies but with psychic resonances of signifiers.

A ternary is the same idea as a binary but with three classes. The K-L-D ternary, one of the most documented in the endolinguistic literature, appears in words tied to the concepts of warmth, light, and depth. It converges, for example, in *calor* and *cálido* from Romance Latin, in *glad* from Germanic English (in its sense of "cheerful" as an internal variant of affective warmth), in the Latin *calidarium*, and in a family of derivatives that appear across multiple Indo-European languages. Endolinguistics maintains that this convergence is not accidental: that the K-L-D ternary organizes, at a deep structural level, a semantic family shared across that entire macrosystem, beyond the

historical divisions among Romance, Germanic, Celtic, Slavic or Indo-Iranian branches.

Macrosystems: One at a Time

A methodological clarification here will save confusion throughout the book. The seven groupings just enumerated, the K-L-D ternary, the F-L binary, and the rest of the cases that will appear in these pages belong **to the Indo-Iranian-European macrosystem**. This does not mean that endolinguistics is limited to that macrosystem or that its categories are universal. The discipline can be applied to any linguistic macrosystem on Earth; each one is studied as its own system, with its own consonantal groupings, its own binaries and ternaries, its own combinatorial regularities. What holds for the Indo-Iranian-European —seven classes, certain alternation axes, specific lexical families— is not directly transferable to the Sino-Tibetan, to Niger-Congo, to Afroasiatic, to Ural-Altaic, to Austronesian, to the Amerindian macrosystems, or to any other. Each one requires its own empirical identification work within its languages.

This does not mean there is no contact between macrosystems. There is: historical loans, border contacts, zones of prolonged bilingualism, and there are also identifiable endolinguistic resonances between distinct systems. But methodologically endolinguistics **does not mix them**: it studies each macrosystem as an autonomous unit and leaves inter-macrosystemic comparison as a separate task, with its own and more cautious validation criteria.

The reason for this caution is twofold, empirical and formal. The **empirical** reason concerns the support of data. The linguistic distance between the peoples of the Earth is measured in tens of millennia if the temporal depth of human divergence is taken seriously, and written records cover only a tiny fraction of that span. An inter-macrosystemic analysis would have to postulate a universal human language beneath the observable diversity, and that leap has no sufficient empirical backing. The **formal** reason concerns the internal logic of the systems. The discipline takes seriously Gödel's theses on the limits of formal systems: a theory that claimed to unify all macrosystems into a supersystem would have to be either incomplete —it would miss regularities that are true at the higher level— or inconsistent — it would generate contradictory results when crossing systems whose internal rules are not commutable. Faced with that alternative, the discipline prefers methodological modesty: one macrosystem at a time, with its own laws, and a separate, cautious study of crossover resonances when they appear.

In practice, the Indo-Iranian-European macrosystem is the **best documented** in the endolinguistic literature published to date, for historical reasons of the discipline —early work concentrated on European and Iranian languages, accessibility of written corpora, a prior comparatist tradition. That is why the examples used throughout this book will almost always come from that macrosystem. The reader should not infer from that concentration that the theory is limited to it: they are didactic examples from a wider field.

The Psychic Inversion: KaLT □ CaLDo

There is a particularly clear example of the kind of work endolinguistics does, and of why its object is not the level of the symbol but the level of the structure. Consider the words **KaLT** (in German, *cold*) and **CaLDo** (in Spanish, *warm*, in the etymological sense of the Latin *caldum*, even though in contemporary usage the adjective has migrated to become the noun *soup*).

These are, at first sight, words with opposite meanings. *Cold* and *warm* are antonyms. If we looked only at meaning, we would conclude there is nothing linking them, and that comparing them would be an arbitrary exercise. But if we look at the consonantal structure, a coherence appears that the surface meaning conceals: both words are organized around the K-L-D sequence (or K-L-T, with the regular phonetic alternation between voiceless and voiced dentals that endolinguistics itself documents). The same consonantal architecture sustains two opposed meanings.

Endolinguistics proposes —and here its most interesting aspect for our discussion comes into play— that this coincidence is not a coincidence. What the K-L-D ternary organizes, at a deep level, is not *cold* or *warm* in isolation; it is the **thermal axis** as such, the warmth/cold dimension as an organizing variable. The two words are, in this sense, two opposed instantiations of the same structural variable. Language, before splitting semantically between cold and warmth, is organized around the axis that contains them both.

This kind of analysis —sometimes called *psychic inversion* in the endolinguistic literature, because the surface meaning inverts while the deep structure is preserved— is exemplary of the level at which the discipline operates. It is not etymology (it is not tracing historical derivations), it is not semantics (it is not interpreting meanings), it is not pragmatics (it is not analyzing contexts of use). It is deep and systemic structural linguistics, in a tradition that goes back to Saussure, Jakobson, Benveniste, but with its own apparatus focused on consonantal combinatorics.

Structuring, Not Totalizing

A clarification is due here that will matter throughout the book. Endolinguistics, at its best, is not a totalizing theory of language. It does not claim to explain everything a word means, nor to reduce meaning to consonantal structure, nor to displace the other linguistic disciplines. It presents itself as a **level of analysis** that captures deep regularities, shared across a macrosystem, stable over time. It is **structuring**: it provides a scaffolding on which the historical, pragmatic, and symbolic levels are subsequently developed.

The word *cálido* is not only K-L-D. It is also an adjective with a Romance history, with specific cultural connotations, with contemporary metaphorical uses, with regional inflections, with personal affective loads. Endolinguistics does not compete with the study of any of those layers; it precedes them, sustains them, organizes them minimally, and then lets them breathe.

This book, it is important to say clearly, **does not pronounce on whether endolinguistics is a valid discipline or not**. This is not the place. There is specific bibliography devoted to founding, criticizing, extending, or refuting the endolinguistic hypothesis; any reader who wants to evaluate it must turn to that dedicated literature. What this book does is something different: it assumes endolinguistics as an operating discipline —working *as if* it were valid— and explores where its boundary lies, so as to say with precision what falls outside it.

Because it is at that boundary, and only at that boundary, that cryptological sociolinguistics becomes necessary.

Symbol, Endolinguistic Code, Presymbolic Structure

To understand the boundary, we need to introduce a distinction that will run through the entire book. Let us call it the **distinction among three levels of the sign**.

Presymbolic structure. This is the level at which endolinguistics operates. These are combinatorial regularities —consonantal, psychophonetic, prosodic— that organize the linguistic system before any culturally coded meaning is installed. The K-L-D ternary is a presymbolic structure: it exists independently of any speaker ever having made the meaning conscious. It is unconscious in the literal sense: it is there, it works, and we do not thematize that it is there. A word can participate in the K-L-D ternary for the simple fact of having been formed within the Indo-Iranian-European macrosystem; no one needs to know.

Endolinguistic code. This is the analytical formalization of that structure. It is what the endolinguist identifies when, after comparing multiple languages and lexical families, they isolate the F-L binary or the K-L-D ternary and formulate it as a unit of study. The endolinguistic code is, properly speaking, the description the discipline makes of the presymbolic structure. It is a product of the analytical gaze, but it invents nothing: it points to something already there.

Symbol. This is an entirely different level. A symbol is a sign that, within a culture, refers to a culturally coded shared meaning. The dove is the symbol of peace; the scales are the symbol of justice; the cross is the symbol of Christianity; the swastika shifted from being a symbol of prosperity to a symbol of genocide within decades. Symbols are historical, negotiable, revocable. They depend on an interpretive community that recognizes them as such. They are, by definition, conscious or at least semi-conscious for the members of that community: one *knows* the dove is a symbol of peace; one *decides* to use it in that sense.

The three levels are real. The three are amenable to study. But they are not the same level, and they cannot be studied with the same tools.

Endolinguistics studies presymbolic structures by formulating them as endolinguistic codes. Its object is structures, not symbols. Its method is comparative-structural, not hermeneutic-cultural.

When someone uses a word with the K-L-D ternary in a political slogan, two distinct levels are operating simultaneously: on the one hand, the word has the presymbolic structure that endolinguistics can

analyze; on the other hand, the word is **used as a symbol** —with a specific historical, political, and affective load— to produce a particular social effect. If we confuse the two levels, as my colleague did, we move from structural analysis to political analysis by a leap that no methodology authorizes: we turn a presymbolic regularity into the causal explanation of a conjunctural phenomenon, and neither discipline advances. Endolinguistics ends up accused of being "one reading among many possible ones"; political analysis remains anchored in a depth that does not belong to it.

The Temptation to Extend

The temptation to cross that boundary is not the error of an amateur. It is a sophisticated temptation that affects precisely those who have worked hard in the deep discipline and want to see its fruits applied to the world.

It works roughly like this. An endolinguist patiently identifies that a certain consonantal ternary organizes a specific semantic family in the Indo-Iranian-European macrosystem. For example —let us return to K-L-D— they identify that this structure underlies words tied to warmth, light, and depth. That is a legitimate, defensible, reproducible finding. Then they come across a political slogan, or a recurrent phrase in propaganda, or a corporate brand expression that contains words with the K-L-D ternary. And they say: *the social effect of this slogan is explained by its activating the deep K-L-D structure in the listener*.

That leap is illegitimate. Not because the structure does not exist, nor because the slogan has no effect, but because the effect is not due to the structure. The effect is due to **strategic use in a specific social context**, to accumulated historical charge, to the network of associations a culture has built around those words at that moment. The K-L-D structure is the same material that sustained *cálido* and *glad* and *caldo*; what produces the political effect is an entirely different network, built over months, years, or at most decades, by campaigns, public figures, media events, affective resonances.

To claim that the deep structure is the cause of the conjunctural effect is to claim that the fact that a car has four wheels explains why it arrives late to an appointment. The four wheels are a necessary condition —without them, it would not be a car— but they are not a sufficient cause, nor even a relevant one, for the phenomenon we are trying to understand.

This is, at bottom, the error of confusing **code with symbol**. The endolinguistic code is a structural condition of possibility: it allows certain words to exist, to cluster, to feel vaguely related. Symbolic use is what gives those words, at a concrete social moment, the charge they produce when they are uttered.

The Need for a Parallel Discipline

From that confusion comes the need for cryptological sociolinguistics.

CSS studies, precisely, the level that endolinguistics must not study: the level of the strategic use of words in specific social con-

texts, the level of the symbol with a conjunctural charge, the level of the message coded to produce differential reading across audiences, the level of plausible deniability and the hide effect. It is a pragmatic, hermeneutic, sociological, cognitive, computational, ethical level. It is not structural in the endolinguistic sense; it is conjunctural, dynamic, emergent.

The two disciplines are therefore **complementary but not commutable**. Endolinguistics offers the structural ground on which CSS builds its analyses. A word used in a *dog-whistle* does indeed have an underlying endolinguistic structure; but the *dog-whistle* is not explained by that structure: it is explained by how that word, with that structure, has been **strategically mobilized** in a specific social context. Endolinguistics answers the question *why that word exists and why it associates with others*; CSS answers the question *how that word is used today, in this context, with what social purpose and with what differential effect*.

We can put the same distinction in another vocabulary: endolinguistics studies the **stable inter-linguistic regularities**; CSS studies the **conjunctural dynamics of platform and context**. The first looks for what persists across millennia; the second documents what emerges, proliferates, and dies within the cycle of an election, a crisis, a trend. The first validates its hypotheses by systemic coherence: an endolinguistic code is valid if it appears consistently in multiple languages of the macrosystem under study. The second validates its own by a wider set of tests: measurable dual audience, plausible deniability, hide effect, contextual persistence, interdisciplinary triangulation.

Both are rigorous. Both are falsifiable. Both can, done well, contribute to our understanding of language and discourse. But they are distinct disciplines, with distinct objects, with distinct methods, and confusing them —letting one invade the territory of the other— is a way of weakening both.

The Bridge

A philosophical nuance is worth stating before closing the chapter, and it will reappear with greater force in the closing chapter (Chapter 29).

It is not that endolinguistics and CSS are wholly indifferent to each other. There is, between them, a relation of **ground and construction**. When a social group decides to cipher a message using a term with a certain endolinguistic structure, it is —often unknowingly— drawing on a deep resonance that word carries. The strategic sender does not usually think in consonantal ternaries; they simply choose words that "sound right," "that hit," "that have weight." That intuition of the sender is not mysterious: it can be understood, in part, as a tacit sensibility to the deep endolinguistic structures of the lexical material.

This means that, philosophically, there is a bridge. But also —and this is crucial— the bridge goes in only one direction. Endolinguistics can inform, at a philosophical level, certain intuitions about why some words are more effective than others in certain social uses. What it cannot do —or should not do, if it wants to preserve its rigor—

is **infer social intentions from endolinguistic codes**. The inference of intention is CSS's task, with its own method and its own validation tests.

The bridge exists, then, as philosophical intuition and as generative hypothesis. But never as methodological substitute.

Toward the Threshold

We have established what endolinguistics is, where its boundary lies, and why a parallel discipline is needed. CSS is thus named, but still without content of its own. Chapter 3 will describe what CSS is **not**, especially in relation to the oracular, esoteric, and occultist traditions that —like CSS— take an interest in meanings that are not on the surface of discourse. There we will introduce the notion that gives structure to the rest of the book: the **threshold between the esoteric and the exoteric**, and the methodological decision to study the threshold without pronouncing on the validity of what circulates on either side.

Chapter 4 will in turn give the positive operational definition of CSS and its four demarcation criteria. Only then will we begin, in Part II, the work of building the conceptual vocabulary of the discipline through the cryptographic metaphor.

For now it is enough for the reader to have this clear: there are two distinct disciplines, with distinct objects, that can dialogue but must not be confused. And out of that care not to confuse them comes, precisely, the possibility that each may do its part of the work well.

CHAPTER 3

What CSS Is Not: The Threshold Between the Esoteric and the Exoteric

Every interest in the hidden carries an ambiguity. On one side of the interest there is sometimes rigor: a scientist investigating the underlying layer of a phenomenon, a historian reconstructing lost archives, a psychologist documenting unconscious processes. But there is also, at times, drift: the amateur who sees codes in every shadow, the occultist who takes ancient correspondences for immediate revelations, the conspiracy theorist who connects dots that no one else sees. Both groups —the one that searches with method and the one that searches without it— share the same initial question: *is there something beneath what is shown?* But they part ways on the second step: *how do we prove that something is there?*

Cryptological sociolinguistics (CSS) coexists dangerously with the second family. It studies what is not on the surface of discourse. It takes interest in meanings that remain invisible to most. It concerns itself with signs that, for those who do not share the key, pass unno-

ticed. Those features are, literally, the same ones that have characterized much of the oracular, esoteric, and occultist traditions throughout human history.

This book, however, is not an esoteric treatise. It belongs to the first group: to those who search with method. And to belong to that group honestly, this chapter must do specific work: **to say what CSS is not**, that is, to demarcate it from the symbolic and oracular traditions with which it shares a surface interest but not an epistemology. The work has two parts. First, to show where each of these traditions sits on the map of knowledge. Second, to explain why, even if we do not share their epistemology, we do not wish simply to dismiss them — and what it means to study the **threshold** that separates them from the public domain.

Let us start with a clarification that will recur in several forms throughout the chapter: **this book does not pronounce on the internal validity of the esoteric traditions**. We will not say whether astrology predicts anything, whether Kabbalah reveals anything, whether Hermeticism accesses anything. These are questions each reader can settle on their own, with their own criteria, with their own experience. What CSS does is not contingent on those questions having one answer or another. CSS works in another place: at the point where a content, whether with esoteric pretensions or not, **crosses into the public space** and becomes an object of social communication. That point —that crossing— is the **threshold**, and it is what we are going to learn to look at.

Ten Traditions and Their Distance from CSS

To situate ourselves, let us briefly survey ten families of traditions that, in some way, take an interest in hidden meanings. This is not an exhaustive classification; it is a map for orientation.

1. Esoteric traditions. Hermeticism, spiritual alchemy, Gnosticism, Theosophy, initiatic traditions. Their typical method is correspondences and analogies between levels of reality (microcosm-macrocosm, above-below, interior-exterior). Their validity criterion is initiation: access to deep meaning requires being introduced by a master within a lineage of transmission. Their epistemological status, from the point of view of CSS, is non-falsifiable: there is no public way to refute a hermetic correspondence, because any apparent refutation can be reinterpreted within the same frame. Distance from CSS: **far**.

2. Religious mysticisms. Jewish Kabbalah, Islamic Sufism, Christian mysticism, *bhakti* traditions. They seek the ultimate meaning of sacred texts, union with the sacred, the transcendent sense. Their method is symbolic exegesis and inner experience. Their validity criterion is theological-mystical, anchored in a revealed tradition. Distance from CSS: **different sphere**. Both can study symbols and hidden meanings, but their validation criteria are incompatible.

3. Divinatory arts (mancies). Astrology, tarot, I Ching, palmistry, cartomancy. They seek guidance or situational diagnosis through systems of correspondence between signs and meanings. Their method is oracles, spreads, horoscopes. Their epistemological status, from the point of view of standard science, is pseudoscientific or ritual. Some

systems (such as the I Ching) have philosophical depth, but their divinatory use is not falsifiable by standard empirical methods. Distance from CSS: **far**.

4. Numerologies. Kabbalistic gematria, Greek isopsephy, modern Pythagorean numerology. They assign numerical values to letters and look for correspondences with hidden meanings. Their method operates by ad hoc rules (which table of equivalences is used) and by the search for fixed correspondences. Distance from CSS: **far**.

5. Modern occultism. Golden Dawn, Thelema, modern ceremonial magic. Systems of magical correspondences, sigils, invocations. Their method is ritual; their efficacy criterion is internal to the system, not public. Distance from CSS: **far**.

6. New Age and syncretisms. Eclectic mixes of contemporary esoteric traditions; "energies," channelings, symbolic therapies. Their method is eclectic; there are no unified validation criteria. Distance from CSS: **far**.

7. Historical symbolic pseudo-sciences. Phrenology (19th century), classical graphology, physiognomy. They claim to extract social or psychic traits from physical signs. They have been refuted or strongly contested by empirical evidence. Distance from CSS: **opposite**, in the sense that they are historical examples of what happens when hidden correlations are sought without controls.

8. Academic hermeneutics of the symbol. Semiotics (Peirce, Eco), mythocriticism (Durand), symbolic anthropology, the Tartu school of cultural semiotics (Lotman). They operate with academically validated interpretive methods. Distance from CSS: **close**, but

CSS adds criteria of empirical validation (dual audience, plausible deniability, triangulation) that go beyond pure interpretation.

9. Memetics and cultural semiology. Studies of the diffusion of units of meaning, analysis of discursive *frames*, meme theory. They combine interpretive methods with quantitative analysis and formal models. Distance from CSS: **near**. CSS can integrate memetic methods with empirical controls.

10. Conspiratorial narratives of meaning. Conspiratorial "numerology," symbol-based conspiracy theories, totalizing reading of any ambiguity as a sign of a hidden plan. Their method is pareidolia and forced correlation. Their status: non-falsifiable, biased, without safeguards against overreading. Distance from CSS: **opposite**. CSS has anti-overreading safeguards, publishes negatives, and operates through rigorous validation criteria. It is, in many senses, the methodological antidote to the conspiratorial narrative.

Five Dimensions of Comparison

There are five dimensions on which CSS differs from most of the preceding traditions. It is worth stating them with the greatest possible precision, because they are also the criteria any reader can apply when someone presents an analysis as "CSS" and wants to evaluate whether it is or not.

First: criterion of truth. In the esoteric traditions, the criterion of truth is initiatic or revealed: something is true because the tradition has transmitted it from master to disciple, or because a sacred text

asserts it. In CSS, the criterion of truth is **public and replicable**: any researcher, with the corpus in hand and the method visible, should be able to arrive at a similar conclusion or identify where their reading diverges.

Second: falsifiability. The typical esoteric traditions are not falsifiable: no possible evidence refutes a hermetic correspondence, because any apparent refutation is reinterpreted. CSS, in contrast, demands **falsifiable hypotheses**: every hypothesis of social coding must come accompanied by the specification of what evidence would refute it.

Third: unit of analysis. Esoteric traditions operate with fixed symbolic units: a tarot card, a planet, an element. CSS operates with **utterances, communicative situations, discursive strategies** — specific pragmatic units that can be delimited, sampled, compared.

Fourth: controls against overreading. Esoteric traditions tend to confirm rather than refute their own premises. CSS builds explicit controls: the **baseline scenario** (can this be explained by ordinary ambiguity?), the **negative examples** (what cases do not function as codes?), the **rival alternatives** (what other explanations compete?).

Fifth: publication of negatives. Esoteric traditions rarely publish failures —a horoscope that did not come true, a correspondence that did not apply. CSS, by method, **publishes the cases where the hypothesis does not hold**, because this is the only way to avoid the accumulated confirmation bias.

The Golden Rule

The five dimensions can be condensed into a single rule, which will help the reader not get confused at any later point in the book:

> **If the criterion of truth is initiatic or revealed, you are in esoteric hermeneutics, not in CSS. If the criterion of truth is public, replicable, and can come out negative, you are potentially in CSS.**

This rule does not prejudge the value of the esoteric traditions. It only situates them outside the field of this specific discipline. A competent astrologer remains a competent astrologer; what she is not doing, when practicing astrology, is CSS. A kabbalist can draw deep meanings from the texts; what he does is not, in the technical sense of this book, cryptological sociolinguistics. And conversely: a researcher can do serious CSS on the social use of astrological or kabbalistic symbols —on how they are strategically used in particular contexts— without adopting the epistemology of those traditions. CSS can analyze the discourse of the horoscope without making horoscopes.

The Threshold: Central Concept of the Book

Up to this point, the chapter could be read as a door-closing: *this is not CSS, nor this, nor this*. But the intention is not to close but to **situate**. Because there is something that the esoteric traditions have understood and practiced for millennia and that deserves CSS's analytical attention, even if from the outside: the notion of the **threshold**.

A threshold, in the vocabulary of any initiatic tradition, is a limit that separates two regions: one reserved for initiates, the other acces-

sible to the general public. To cross the threshold is to acquire a knowledge that was previously forbidden; to remain on the other side is to live with meanings that are not decoded. The very existence of the threshold presupposes that, at a given moment, the same sign can be fully meaningful for some and opaque for others.

That structure —the same surface, different readings— is, as we have already seen, the basic structure of the phenomenon CSS studies. CSS does not adopt the initiatic notion of the threshold in its metaphysical sense. It does not hold that there is a higher plane of reality to which some have access and others do not. But it recognizes, and gives a specific name to, the **formal structure** of the threshold: the pragmatic fact that a sign circulates in a social space where part of the audience possesses the interpretive key and another part does not. That pragmatic threshold is neutral with respect to what lies on the other side; there may be political, commercial, diplomatic, subcultural, and of course also esoteric messages. All share the same formal architecture.

This is why this book can speak of esotericism without being esoteric. It speaks of the threshold, not of the content. When Masonic iconography appears in a corporate logo —a case documented in multiple academic studies— CSS does not ask whether Freemasonry is right or wrong in its cosmology; it asks what fraction of the public recognizes the iconography, what communicative function that asymmetry serves, what level of conscious or unconscious intentionality the sender has, what evidence there is of differential reading among groups. It is an analysis of the **social use of the symbol**, not of the **ini-**

tiatic meaning of the symbol. The two questions are perfectly distinguishable; mixing them is, precisely, the error this chapter is designed to prevent.

The esoteric/exoteric threshold is, then, a legitimate object of CSS. What CSS discards is using it as evidence of a specific cosmology. What CSS preserves is its formal architecture, which it shares with the political *dog-whistle*, with platform *algospeak*, with subcultural jargon, with the prison cryptolect. In all cases there is a pragmatic threshold. In some cases that threshold has been historically built from within explicit initiatic traditions; in others it has emerged through evolutionary pressure without any theology in between. The formal structure is the same.

What CSS Takes from the Traditions

Though it rejects their epistemologies, CSS can take important things from the accumulated work of the hermeneutic and symbolic traditions. At least four things deserve mention.

Cultural repositories of symbols. The esoteric traditions and the great academic hermeneutics have cataloged in detail the symbolic systems of multiple cultures. An analyst who wants to know how a symbol —a number, a color, a geometric figure, a gesture— has historically been used has in those catalogs an initial source of hypotheses. Those hypotheses, then, must be tested with CSS methods.

Rhetorical typologies. Classical hermeneutics and the esoteric traditions have developed sophisticated taxonomies of figures, tropes,

correspondences, inversions. Many of these typologies are useful as descriptive vocabulary for analyzing contemporary phenomena of coding, provided they are used as tools and not as authority.

History of interpretive frames. Knowing how an interpretive frame has evolved over time —what groups adopted it, what transformed it, what discarded it— allows one to distinguish a genuine innovation from a repetition in another format. That is rigorous cultural history, and it is material CSS needs.

Sensitivity to the multiplicity of readings. The hermeneutic traditions teach, among other things, that a text or a symbol admits several legitimate readings. That sensitivity is indispensable preparation for CSS, which precisely studies the coexistence of differential readings across audiences. Losing that sensitivity is to settle for the literal reading as if it were the only one, and that is the other face of the hermetic error: the flat formalism that denies the very existence of the phenomenon CSS studies.

What CSS Rejects

With equal clarity, there are things CSS does not accept (since they fall outside its scope).

Revealed authority as evidence. That a master, a sacred text, an initiatic tradition, a canonical author affirms something does not constitute valid evidence in a CSS hypothesis. Evidence must be public and replicable.

Non-falsifiable inferences. Assertions constructed in such a way that no evidence could refute them do not belong to the CSS domain. If a hypothesis cannot come out negative, it is not a CSS hypothesis.

Totalizing reading. The temptation to read everything as code — every ambiguity as a signal, every coincidence as a message— is the vice against which CSS arms itself. CSS demands specificity: a hypothesis of coding must identify *what* element functions as a code, *for what* group, *in what* context, *for what* purpose. Without that specification, there is no CSS.

Deterministic predictions. Oracular traditions typically offer definitive predictions ("this means X," "Y will happen"). CSS formulates conditional, probabilistic hypotheses, subject to contextual controls. It does not say *what a symbol means*; it says *how it functions in such a context, for such a group, with what evidence and with what limits* —limits established by the context of the system itself.

A Worked Example of the Threshold

Before closing the chapter, a brief example that illustrates how CSS looks at an object that has traditionally been esoteric terrain without becoming esoteric itself.

By the middle of the 20th century, the symbol of the *eye within a triangle* —historically used in Masonic and 18th-century deist iconography, present on the reverse of the United States one-dollar bill, and with a long prior Christian genealogy— begins to appear with increasing frequency in popular culture: album covers, music videos, corpo-

rate logos, celebrity gestures in photographs, or in the character Bill (*billete*) in *Gravity Falls*.

Faced with this phenomenon, there are at least three possible ways to respond.

The esoteric response affirms that the symbol contains a deep meaning (Masonic, illuminist, hermetic, according to the tradition) and that its proliferation is evidence of the expansion of an initiatic program. That reading is not falsifiable: any counter-example is interpreted as "exoteric simulacrum," and any absence of verifiable effects is interpreted as "invisible operation." This is not CSS.

The formalist-reductionist response affirms that the symbol is only a neutral geometric shape, that its contemporary appearance is statistical coincidence or visual style, and that there is nothing to investigate. This is also not CSS: it dismisses the phenomenon without studying it.

The CSS response formulates specific hypotheses. For example: *"The eye-triangle symbol functions as a code of aesthetic belonging for a subgroup of pop-cultural audiences between 1995 and 2015, with measurable differential reading between consumers of esoteric culture and general consumers, retaining plausible deniability on the part of the senders (artists, brands), and with observable contextual persistence in corpus."* This hypothesis is falsifiable: a corpus can be built, differential reading measured, plausible denials documented, rival alternatives established (such as "it is only a visual trend"), and results published —positive or negative. That is CSS.

Note what happened in the third response: we did not affirm that Freemasonry has this or that doctrine; we did not affirm that the senders are Masons; we did not affirm that there is an initiatic plan behind. We affirmed something much more modest and much more workable: that a symbol with an initiatic genealogy is being used in a way that produces differential reading across audiences, and we propose a methodology for studying that phenomenon. That is the kind of question CSS asks. It is a question about the social use of symbols, about the pragmatic threshold, about informational asymmetry. It is not a question about the truth of the initiatic tradition.

Bridge to the Operational Definition

With this chapter we have closed, on the esoteric and oracular side, the demarcation of CSS. In the preceding chapter we closed, on the endolinguistic side, the other demarcation. We now have CSS situated between two great neighborhoods: that of the deep structural linguistic disciplines, which work at a different level; and that of the esoteric hermeneutic traditions, which work with incompatible criteria.

What remains is to say, positively, what CSS is. What units it handles. What criteria it applies. What quick test allows one to decide whether a phenomenon falls within its domain or not. That is the work of Chapter 4, which completes Part I before we enter, in Part II, the conceptual vocabulary borrowed from mathematical cryptography.

If the reader has reached this point with the sense of being in front of a new but possible field, with its own limits and its explicit methodological decisions, the chapter has done its work. If the reader still wonders, with a certain productive skepticism, whether all this is sufficiently distinct from the currents with which it could be confused, the next chapter is made to dispel that doubt with the maximum possible precision.

CHAPTER 4

What CSS Is: An Operational Definition

The two preceding chapters have traced the boundaries of cryptological sociolinguistics with two large neighbors. On one side, endolinguistics: a legitimate discipline that studies a deep structural level of language and must not be confused with the study of the conjunctural phenomena of social coding. On the other, the oracular and esoteric traditions: families of knowledge that share with CSS an interest in the hidden but operate with validity criteria that are incompatible with the empirical, falsifiable method.

The positive task remains. To say what CSS *is*. To give it an operational definition: a formulation clear enough that any reader can, on finishing this chapter, identify whether a phenomenon falls within its domain or not. That is the task of the pages that follow.

The Operational Definition

I propose the following working definition. Cryptological sociolinguistics is the **systematic and verifiable study of forms of social cod-**

ing in discourse that cumulatively satisfy at least the following conditions:

1. **They produce differential readings across audiences.** Different audiences, exposed to the same message, extract systematically different interpretations. These are not mere differences of opinion but stable, demonstrable, measurable interpretations.

2. **They preserve plausible deniability for the sender.** The message is constructed —by design or by evolution— in such a way that the sender can defend a literal reading if challenged. This shields the sender and is one of the most constant structural features of the phenomenon.

3. **They evade human or algorithmic filters.** Whether because they escape a digital platform's moderation, a censoring regime's surveillance, or a general observer's attention, social codes work largely through their capacity to pass unnoticed in the channels where they circulate. In the psychoanalytic case, that observer can even be a psychic instance internal to the speaker themselves: the intrapsychic censorship that forces content to encipher itself as symptom, slip, or dream before being uttered.

4. **They operate partly beneath what is socially conscious.** The phenomenon is not reducible to the subliminal or to the Freudian unconscious, but it does include what the general audience does not explicitly thematize. Its natural domain includes the subliminal, the non-thematized, and the repressed in the sociological sense of the term. It is, properly speaking, a **structure of the socially shared unconscious**, of a systemic and distributional character, distinct from the

Jungian collective unconscious understood as a repertoire of symbolic archetypes.

These four criteria need not all be satisfied at the same time in every case. A phenomenon that satisfies the first three but not the fourth —a code openly used by everyone but with differential readings— can still be a legitimate object of CSS, though with the caveat that its *hide effect* is low. A phenomenon that satisfies only one —for example, a message with differential reading but without relevant intentionality or plausible deniability— probably belongs to another discipline (to pragmatics, to stylistics, to the general theory of political communication).

The definition, therefore, is not a rigid lock; it is a **weighted filter**. The more criteria a phenomenon satisfies, the more clearly it enters the CSS domain; the fewer, the closer it gets to the boundary with neighboring disciplines. That elasticity is deliberate: the CSS analyst must handle a breadth of spectrum sufficiently pragmatic to produce results in concrete cases, instead of becoming paralyzed in disputes over strict demarcations.

Units of Analysis

For a discipline to function, it needs clear units of analysis. Endolinguistics, we saw, works with logico-mathematical models (binary and ternary codes) in words and lexemes within linguistic macrosystems. With what does CSS work?

CSS works with units that are, for the most part, **pragmatic and contextual**:

Full utterances. Not necessarily isolated words, but phrases, sentences, messages —including their tone, their rhythm, their frame. "Law and order" is not analyzed as separate words but as a functional utterance in specific contexts. What is fundamental here is the **conjunctural context**: the same utterance may be a CSS object at one moment and cease to be one at another, because coding is born and dies with its conditions of emission.

Discursive frames. Interpretive structures that organize how an audience understands an utterance. The same message under two different frames produces differential readings.

Communicative strategies. Observable patterns in how a sender deploys messages across time, across channels, across different audiences.

Discursive timing. When a message is emitted, at what moment of the public attention cycle, after or before what event. Time itself is information in CSS.

Paired corpora. Collections of emissions (the messages suspected of encoding something) and of receptions (the documented responses of different audiences to those messages). CSS always works with both sides of the equation, not only with the sender's text.

What CSS does **not** take as a primary unit is the isolated word or its internal consonantal structure. That is endolinguistic territory. When CSS needs to refer to a specific word —for example, to analyze

an *algospeak* substitute such as *unalive*— it does so in the word's enunciative function, not in its presymbolic structure.

Temporality: the Conjunctural

Endolinguistic codes are stable: the K-L-D ternary has organized the same group of lexical families for millennia. Social codes, by contrast, are **conjunctural**: they are born, circulate, and die in much faster cycles. An *algospeak* code may become obsolete in weeks when the platform updates its moderation. A political slogan works during a campaign and may lose efficacy when the social context changes. A subcultural cryptolect transforms generationally.

That short temporality has important methodological consequences. CSS does not look for millennial regularities; it looks for situational regularities. It does not test its hypotheses by their consistent presence across multiple languages, but by their demonstrable operation in specific, delimited contexts. That implies that the CSS corpus is dated, geolocated, platformized: "such a phenomenon on such a platform, between such dates, with such an audience."

This temporality also has a philosophical dimension worth stating: CSS studies a present that shifts under its feet. Its findings age. An *algospeak* analysis from 2020 has documentary value in 2026, but its operational validity is limited, because the codes it analyzed have already been replaced. This perishability is not a defect; it is a structural feature of the object. The discipline that studies it must accept this as part of the method.

It is worth noting, in passing, that there is a very different kind of study: **qualic metaphysics**, which attempts to integrate endolinguistic regularities into a temporality more expanded than the conjunctural. That work is properly philosophical and falls entirely outside CSS. CSS concerns itself with the changing present; the question of the structural permanence of codes belongs to another field.

Intentionality: Conscious or Unconscious

A delicate question, which CSS inherits from pragmatics and sociology, is the question of the sender's intentionality.

In endolinguistics, intentionality is not central. A speaker does not *decide* to participate in the K-L-D ternary when using the word *cálido*: they simply use it because it is the word available in their language. The structure operates independently of what the speaker knows or wants.

In CSS, intentionality is central —but understood with an important nuance. It does not require that the sender have a conscious, deliberate, articulable intention. It admits, and in fact studies with particular interest, cases where the intention is **partial, unconscious, collective, or emergent**. A *dog-whistle* can be deliberately calculated by a campaign team, or it can emerge in a candidate's speech as a tacit adaptation to the audience that applauds. An *algospeak* term can be adopted consciously by an expert user or simply imitated by a young user who saw others do it. A diplomatic code can be the result of cal-

culated drafting or of professional habits so deeply internalized that the drafters no longer notice them.

In all these cases, there is **relevant intentionality** in the pragmatic sense of the term: the message is doing something more than literally saying, and that "something more" is not random. It may be an individual or collective agent, may be conscious or unconscious, may be deliberate or habitual, but it is not noise. That is the intentionality CSS takes as its domain.

Philosophically: CSS does not need to solve the metaphysical problem of intention or its absence. What it needs is to document stable patterns of coding and associate them with identifiable social functions. The individual intention of the sender, when it can be established, is additional evidence; when it cannot, it does not invalidate the analysis.

Validation Criteria

How is a CSS hypothesis tested? Four types of evidence, converging:

Stable differential reading. Measurable evidence that different audiences interpret the message in significantly different ways. This can be documented with segmented surveys, blind expert annotation, cognitive studies (reaction times, priming), computational analysis of responses on networks.

Demonstrable plausible deniability. Evidence that the sender can coherently defend a literal reading of the message. If the message

does not admit an alternative literal reading, then it is not coded but openly explicit, and probably belongs to another kind of analysis.

Contextual or temporal persistence. Evidence that the coding effect holds across different contexts or temporal moments. An effect that appears only in an isolated case may be chance; an effect that reproduces systematically is a genuine CSS phenomenon.

Interdisciplinary triangulation. Convergence of evidence coming from at least two independent methodological families: interpretive (semiotics, hermeneutics), cognitive (implicit measures, RTs, priming), computational (embeddings, network analysis, co-occurrence patterns), structural (diffusion analysis, network topology).

The degree to which these four sources converge can be synthesized in what we will call, later in the book, the **Interdisciplinary Convergence Index (ICI)**. It is not a magical metric; it is a pragmatic indicator of how much independent evidence backs a CSS hypothesis. Few hypotheses in the human sciences enjoy very high ICIs; what matters is that the index be explicit and that publication decisions be made on its basis. Beyond the immediate evidential backing, the ICI provides a **baseline for longitudinal follow-up**: given that codes and their contexts mutate rapidly, recording the index at a dated moment allows comparison of how the evidence changes over time and documents the life cycle of each coding.

The Quick Demarcation Test

For the practical analyst, there is a brief test that allows deciding, in most cases, whether a phenomenon belongs to CSS or to endolinguistics. We will call it the **unit-of-analysis test**.

> **If what you are studying is a word or consonantal code within a linguistic system (using multiple manifestations of the code, that is, several distinct languages), you are in endolinguistics.** >> **If what you are studying is a full utterance, a communicative situation, a discursive strategy, or a *timing*, originating in a single language, you are in cryptological sociolinguistics.**

Applied: if you ask *why the word "cálido" exists and what deep structure it shares with "glad"*, you are in endolinguistics. If you ask *why candidate X used the word "cálido" in that speech, before that audience, at that moment, with what differential effect across groups*, you are in CSS.

The difference is not one of depth but of object. Both analyses are legitimate, both are rigorous, but they do not speak of the same thing.

A Worked Example

Let us take a nearly self-evident case, not overly hidden, to fix ideas.

In August 1977, during Jimmy Carter's years as president of the United States, an administration communiqué referred to a foreign-policy meeting using the phrase *"a cordial and frank exchange of views."* To any untrained observer, the phrase sounds like praise: a cordial and frank exchange, a sign of good diplomatic relations.

For those who had the interpretive key —diplomats, analysts, specialized journalists— the phrase meant something very different. In Cold War diplomatic vocabulary, *"cordial and frank"* was a coded turn: *cordial* meant "polite but without agreement," and *frank* meant "there was open disagreement." The communiqué, far from celebrating good relations, was reporting with the greatest possible discretion that the meeting had been tense and had not reached agreements.

Let us apply the four CSS criteria to this case.

Differential reading? Yes, demonstrable. The general audience read "cordiality"; the specialized audience read "tension." Subsequent editorials and analyses document both readings.

Plausible deniability? Yes. If the spokesperson had been confronted with "you are saying the meeting was tense," they could have responded with perfect aplomb: "I said it was cordial and frank." Both are words with positive meaning in common usage.

Filter evasion? Moderate. It evades the general public's attention filter, which does not perceive the coding. It does not evade algorithmic filters (that was not the diplomatic concern of 1977) but it does evade public political criticism: an ordinary reader had no grounds for accusing the communiqué.

Operation beneath what is socially conscious? Yes. The general reader did not know they were receiving a code. For the initiated, it was fully conscious.

The four criteria are satisfied. The phenomenon is a legitimate CSS object.

Note, however, what CSS does **not** do in analyzing this case. It does not affirm that the sender was malevolent. It does not affirm that the message was false. It does not affirm that the general audience was deceived in any morally significant sense. What it affirms is something much more modest and much more demonstrable: that the same message circulated with stable differential readings, that the sender preserved plausible deniability, and that the phenomenon is documentable and replicable. That is the style of CSS hypotheses: modest in scope, specific in content, falsifiable in method.

The Triple Regime of the Sign: Symbol, Endolinguistic Code, Social Code

With the operational definition established, we can finally state clearly the distinction that has been promised since Chapter 1: the distinction among symbol, endolinguistic code, and social code. This distinction is, at bottom, what allows the three disciplines —cultural hermeneutics, endolinguistics, CSS— to coexist without treading on each other.

The symbol is a unit of shared cultural signification. The dove, the cross, the scales, the color black for mourning in Western tradition, white for mourning in several Eastern traditions. Symbols are historical, negotiable, conscious or semi-conscious for the members of the cultural community that recognizes them. Cultural hermeneutics (semiotics, mythocriticism, symbolic anthropology) is the discipline that studies them.

The endolinguistic code is a presymbolic structure: a combinatorial regularity at the consonantal level that organizes, in depth and without requiring speaker awareness, entire semantic families within a linguistic macrosystem. The K-L-D ternary, the F-L binary, and the seven consonantal groupings of the Indo-Iranian-European macrosystem are the best-documented examples in the literature (other macrosystems have their own codes, identified with the same methodology within each system). Endolinguistics is the discipline that studies them.

The social code is the proper object of CSS. It is the strategic use of signs —including symbols, words with endolinguistic structures, prosodic marks, gestures, discursive tempo— in specific social contexts, with the (conscious or unconscious) purpose of producing differential reading across audiences, preserving plausible deniability and generating a measurable hide effect for a part of the audience.

The three levels are real. The three can interact in the same utterance. A political phrase can, simultaneously: (a) use culturally coded symbols (the symbol); (b) contain words with a deep endolinguistic structure (the endolinguistic code); (c) be strategically emitted to produce differential reading (the social code).

The three levels, however, require different tools to be studied. Confusing them —or worse, claiming that one alone explains what the other two do— is the error against which this book is built. The example with which we opened Chapter 2, of the colleague who tried to explain the political effect of a slogan from its endolinguistic structure, was precisely a case of level confusion. Now, at the end of Part

I, we should be able to name with precision what he was missing: he was missing the distinction between the presymbolic level (endolinguistic), the symbolic level (cultural hermeneutic), and the pragmatic-social level (CSS). Each one requires its own analysis; the political effect is the property of the third, not of the first.

Closing Part I

With this chapter Part I of the book concludes. We have done the foundational work: naming the phenomenon, demarcating it from endolinguistics and from the esoteric traditions, and giving it an operational definition with four criteria and a quick test.

Part II, which begins in the next chapter, makes a turn of style. Over six chapters we will traverse the history and logic of mathematical cryptography —from ancient ciphers to contemporary asymmetric cryptography, passing through Shannon, Kerckhoffs, hashes, and side channels— not to learn mathematics but to build the conceptual vocabulary with which CSS thinks its object. Each chapter of Part II takes a cryptographic idea and uses it as an illuminating metaphor of a social phenomenon. These are metaphors, not algorithms: the reader needs no prior mathematical background.

What Part II will give us, in the end, is a language. A precise language, shared with a formal discipline, for speaking of sender, key, channel, noise, asymmetry, signature, zero-knowledge, side channel, and steganography when we apply these notions to social speech. With that language in hand, Part III will be able to catalog the con-

crete families of social codes (dog-whistles, plausible deniability, hide effect, algospeak, cryptolects, covert signaling), and Part IV will be able to situate them within the theoretical canon from which they draw their intellectual origin.

But all this will come. For now, we have done the most difficult part of the beginning: to say what CSS is and what it is not, with the greatest possible precision. With that, the book can finally get to work elucidating the work of CSS.

Part II

The Cryptographic Metaphor

CHAPTER 5

A Brief History of Human Cryptography

Before entering the conceptual apparatus of cryptography —sender and receiver, key and channel, asymmetry and digital signature— it is worth recalling something simple and almost obvious: **human beings have always hidden messages**.

There is no documented civilization that has not developed, at some moment and for some reason, some technique for transmitting information in such a way that only the authorized recipient could read it. Cryptography, so understood, is not a modern mathematical invention; it is a human practice as old as writing, perhaps older. The reasons are likewise constant: power, war, commerce, love, conspiracy. Each one generates its own need for concealment; each need generates its own technical solution; each technical solution generates, sooner or later, an adversary capable of breaking it, which in turn generates a new solution. The history of cryptography is, in that sense, a history of arms races between those who want to say something to a few and those who want to have it heard by many —or by no one.

This chapter surveys that history in a brief and accessible version. It does not aim to teach cryptography in the technical sense; there are excellent books for that. It aims at something different: to show that the cryptographic concepts we are going to use as metaphors in the following chapters have ancient roots, and that the analogy between mathematical ciphering and social coding is, in large part, a *genealogical* analogy. Both practices respond to the same human problem —how to say something to someone without it being heard by others— with different means. CSS studies the discursive and social version of that problem; classical cryptography studied the textual and formal version. They are close relatives.

It is also worth clarifying, at the outset, three terms that are often used as synonyms and are not: **cryptography**, **cryptology**, and **cryptonymy**. The three share the Greek root *kryptós* —"hidden"— but the suffix decides the scope of the field. **Cryptography** (*kryptós* + *gráphein*, "to write") is the craft of hiding messages: the design and construction of ciphers. It is, by vocation, technical. **Cryptology** (*kryptós* + *logos*, "study") is, in its standard academic sense, the name of the total field —cipher plus cryptanalysis— but in an older and broader sense it recovers the full weight of the suffix *-logy*: not technique but discourse, study, reason. In that wider sense, cryptology is the study —philosophical, historical, semiotic, social— of the hidden in general, and not only of its mathematical forms. It is the sense this book reclaims. Not because we disdain mathematics —the next chapter will be devoted entirely to Shannon— but because between a ciphered diplomatic message and a political *dog-whistle* there is a structural kin-

ship that cannot be studied with a single tool: one calls for discrete mathematics; the other, for pragmatics, sociology, and discourse analysis.

Cryptonymy (*kryptós* + *nómos*, "law" or "norm") completes the map. The term, infrequent in the technical world, was put into circulation by the psychoanalysts Nicolas Abraham and Maria Torok in *Le verbier de l'homme aux loups* (1976) to name the study of how certain signifiers function as crypts that enclose, deforming it, an unutterable psychic content. Here ciphering is no longer a voluntary operation performed by a sender on a message; it is a structural effect: language itself, under certain conditions, hides more than it says, and it does so without a conscious "encipherer" behind it. That shift —from ciphering as technique to ciphering as a phenomenon of language— is exactly the kind of widening that CSS needs. Among cryptography (which asks for an algorithm), cryptology in the broad sense (which asks for a study), and cryptonymy (which asks for a theory of the linguistic symptom), cryptological sociolinguistics situates itself as an interdisciplinary project: it takes from the first the formal rigor, from the second the reflective vocation, and from the third the suspicion that social codes do not always have an identifiable author.

That is why this book is called *Cryptological Sociolinguistics* and not *Cryptographic Sociolinguistics*. The difference is not cosmetic. It announces that the object will be treated as a field of study —with historical, social, and philosophical dimensions— and not only as a set of techniques for deciphering messages.

There is also, at the end of the chapter, an argument worth anticipating: cryptography is not broken, in practice, only by attacking algorithms. It is also broken —and sometimes above all— by attacking people. The history of ciphering has always been accompanied by the history of **social engineering**: the art of obtaining the key not by solving mathematics but by convincing a human to hand it over. That figure —the **social hacker**— is, in many respects, the closest relative of the object this book studies.

Antiquity: Words on the Skin, Turns on the Stick

Herodotus, in the fifth book of his *Histories*, tells a curious scene. Histiaeus, tyrant of Miletus and prisoner of the Persian king Darius, wants to send a clandestine message to his nephew Aristagoras: to incite him to revolt against Persia. The problem is obvious: any messenger can be intercepted. Histiaeus's solution is beautiful and cruel. He orders the head of a trusted slave to be shaved, tattoos the message on the scalp, waits for the hair to grow back, and then sends the slave with instructions to be shaved on arrival. The message travels invisibly beneath the hair. It is, probably, one of the earliest documented examples of **steganography** —the concealment not of the content but of the very existence of the message.

Herodotus also tells —centuries before our era— of other techniques. The Spartans used the **scytale**: a cylindrical stick of specific diameter. The sender wound a strip of leather around the stick and wrote the message longitudinally; unwound, the strip showed only

disordered letters, impossible to read without a stick of the same diameter. The recipient, with their twin scytale, wound the strip and read. It is probably the first transposition cipher in Western history: the message remains visible but reordered.

Julius Caesar, in the *Gallic Wars*, describes his own method. He shifts each letter of the alphabet by a fixed number of positions —three, in his case— and sends the shifted version to his generals. This is the **Caesar cipher**, the most didactic of all substitution ciphers: simple, breakable in minutes today, but sufficient in the first century BCE against enemies who probably did not read Latin fluently and even less thought in terms of alphabetical displacement.

Two details deserve noting from this ancient period. First, that the initial solutions combined —as ours still do— primary mathematical techniques (displacement, transposition) with material techniques (the stick of the scytale, the skin of the slave). Second, and more important: the use of cryptography, already in antiquity, had **war** as its motor in nearly every case. To hide a message was, in the vast majority of cases, to hide it from a military or political adversary. That association between cipher and enemy will run through the entire history of the field.

Medieval and Renaissance: Polyalphabetization

During the Middle Ages, cryptography flourishes in unexpected spaces. Jewish Kabbalists develop systems of **gematria** —assigning numerical values to Hebrew letters to extract hidden meanings from

sacred texts— which, although their use was more exegetical than military, refined the techniques of substitution. In the Islamic world, the polymath Al-Kindi, in the 9th century, writes the first known treatise on **cryptanalysis**: he explains that certain ciphers can be broken by analyzing the frequency with which letters appear in the ciphered text and comparing it with the standard frequency of letters in the language. That technique —frequency analysis— becomes the first great tool of those who want to read what they should not be able to read. A monoalphabetic substitution cipher, such as Caesar's, becomes obsolete against any systematic frequency analysis.

The response arrives in the Italian Renaissance. **Leon Battista Alberti**, humanist and architect, writes in 1467 a treatise where he proposes using several different alphabets alternated within the same message. This is the **polyalphabetic cipher**: the same letter of the original message can be enciphered as different letters depending on the position in which it appears. Frequency analysis, which exploited monoalphabetic regularity, is blocked. A century later, the Frenchman **Blaise de Vigenère** perfects the idea with the cipher that bears his name, using a keyword to determine which alphabet applies to each position. The Vigenère cipher, known for three centuries as "the indecipherable cipher," sustained European diplomatic confidentiality well into the 19th century.

Here a principle appears with clarity, one that CSS will inherit as metaphor: the security of a cipher lies not in hiding its method but in hiding its key. The Vigenère algorithm was public; what was protected was the specific word used as key in each communication. This

intuition will be formalized explicitly, in the 19th century, with Kerckhoffs's principle, to which we will devote Chapter 7.

Special mention is due to the domain of love and palace conspiracy. During the 16th and 17th centuries, the European courts generate an enormous quantity of ciphered correspondence: clandestine lovers, ambassadors with secret instructions, conspirators against the crown. Mary Stuart is executed in 1587 in part because her ciphered letters to the plotting circle against Elizabeth I are intercepted and deciphered by Francis Walsingham's cryptanalysts. Cryptography, for the first time in widely accessible records, decides individual destinies: a compromised key costs a head.

The 19th Century: The Principle of Publicity of the Method

In 1883, a Dutch military officer residing in France, **Auguste Kerckhoffs**, publishes in the *Journal des Sciences Militaires* an article titled *"La Cryptographie Militaire."* There he states six design principles for practical cryptographic systems. The second of those principles —which would become legendary under the name *Kerckhoffs's principle*— says, in substance, that the security of a cryptographic system should not depend on the secrecy of the system itself, but on the secrecy of the key. In other words: even if the enemy fully knows how the algorithm works, the communication must remain secure as long as they do not know the key.

This principle is, philosophically, a rupture with centuries of esoteric tradition in the field. During much of the history of cryptogra-

phy, the methods themselves were kept secret: it was presumed that an enemy who did not know *how* the ciphering was done would not be able to break it. Kerckhoffs says the opposite: he presumes the worst. He assumes your adversary will eventually know your method —through espionage, through leak, through reverse engineering— and designs so that, even so, they cannot read your messages without the key. It is a doctrine of **transparency of the method and opacity of the key**.

This doctrine will be one of the methodological pillars of CSS. As we will see in Chapter 7, CSS inherits from Kerckhoffs the idea that the method must be public even if the data may be confidential. A CSS analysis is not validated because "the analyst saw it that way"; it is validated because any other researcher, applying the same method to the same corpus, should arrive at similar conclusions. Methodological transparency is the password that separates us from esotericism.

The 20th Century: From the Mechanical to the Mathematical

With the two world wars of the 20th century, cryptography enters an industrial scale without precedent.

The **Enigma machine**, developed by German engineering in the 1920s and 1930s and widely used by Nazi forces during World War II, is the paradigmatic example. Enigma is an electromechanical machine: a series of rotors with distinct internal wirings that, combined with a plugboard, allowed any message to be ciphered with a daily key producing an astronomical combinatorics. The number of possi-

ble configurations exceeded 150 quintillion. The Germans considered Enigma indecipherable.

It was not. At Bletchley Park, a complex of buildings in the English countryside, a team of mathematicians, linguists, and women operators —among them the young **Alan Turing**— managed, over the years 1940–1945, to systematically break Enigma communications. The feat combined theoretical brilliance (the prior work of the Polish mathematician Marian Rejewski and his team), dedicated engineering (the "Bombes," machines specifically designed to search for daily keys), and human intelligence (each intercepted message reduced the search if it contained predictable words: greetings, headers, weather reports). The cryptanalysis of Enigma, according to later historiographical estimates, shortened the war by two to four years and saved millions of lives. A significant part of the military history of the 20th century was decided in a building where keys, not positions, were being attacked.

Turing's work has another consequence, less military but more enduring. By formalizing the concept of mechanical computation — the "Turing machine"— Turing lays the theoretical foundations of modern computing. Cryptography, from then on, ceases to be a craft with a majority human component and becomes, progressively, a pure mathematical subfield. Ciphering will be a matter of algorithms executable on machines, not of mechanical contraptions. That migration completes its arc with Claude **Shannon** in 1949, whose *Mathematical Theory of Secrecy Systems* —the topic of the next chapter— founds cryptography as a formal science.

Asymmetric Cryptography: The Revolution of the 1970s

All cryptographic systems up to the 1970s share one characteristic: they are **symmetric**. That is, the same key used to encipher is used to decipher. This creates a serious logistical problem: before sending a ciphered message, sender and receiver must agree, through some secure channel, on the key to use. If they already have a secure channel, why encipher? This problem —the **key distribution problem**— tormented cryptography for centuries. In military contexts it was solved with physically distributed code books; in civilian contexts, it was directly an obstacle to many uses.

In 1976, **Whitfield Diffie** and **Martin Hellman** publish an article called *"New Directions in Cryptography,"* where they propose a revolutionary idea: a key-exchange system where sender and receiver can agree on a secret key by communicating *through a public channel*. The adversary can listen to all the communication and still not deduce the resulting key. The method, based on mathematical properties of the discrete logarithm, changes cryptography forever.

Two years later, three MIT researchers —**Ron Rivest**, **Adi Shamir**, and **Leonard Adleman**— propose an even more powerful system: each user has two keys, one **public** and the other **private**, mathematically related. What is enciphered with the public key can only be deciphered with the private key, and vice versa. No one needs to share secrets in advance: I publish my public key to the world, anyone can encipher a message for me using that key, and only I —with my private key— can decipher it. This is the **RSA** system, named for the

initials of its inventors. It is the basis of nearly all cryptography on the internet: every time a browser establishes an HTTPS connection, RSA (or one of its heirs such as ECC) is behind it.

The conceptual importance of asymmetric cryptography goes beyond the technical. It introduces an idea that will be central for our Chapter 8: **asymmetry** as a structure of communication. Two parties can participate in a ciphered exchange without sharing the same prior knowledge. One possesses one key, the other another; the very structure of the system —not a prior social agreement— guarantees that only the recipient can read. That idea, as we shall see, has powerful social parallels: belonging to an in-group is, in many senses, equivalent to possessing an interpretive key that others do not have. Cryptological sociolinguistics will inherit the intuition.

The Post-Quantum Horizon

Since the 1990s, it has been theoretically demonstrated that quantum computers of sufficient power could break RSA and Diffie-Hellman in polynomial time using Shor's algorithm. This is not an immediate problem —practical quantum computers remain experimental— but it is a *latent* problem. That is why, for decades, work has been under way on **post-quantum cryptography**: systems that would be robust even against adversaries with quantum capabilities. Standards such as CRYSTALS-Kyber, recently selected by standardization bodies such as NIST, represent the next generation of the field.

We will not go into the technical detail. What is relevant for us is the pattern: each generation of cryptography is built anticipating the most powerful adversary imaginable, and each generation, sooner or later, finds its rupture and produces the next. The human history of the secret is a stairway without end.

The Social Hacker: The Other History

So far we have spoken of mathematics, machines, algorithms. But there is a parallel history that the grand technical narrative tends to underestimate: that of the **social hacker**.

A technological hacker breaks a system by attacking its algorithm, its implementation, its code. This is the classical model of the cryptographic adversary: someone who tries to factor enormous numbers, who looks for weaknesses in the cipher, who exploits programming errors. It is, in popular terms, the cinematic figure with a hood and a black screen. It exists, it does damage, it matters.

But there is a second figure, less cinematic and often much more effective: the **social hacker**. Their method is not algorithmic but human. They do not break the cipher: they get the key by talking to the human who has it. The main tool is **social engineering**: phone calls, legitimate-looking emails, forged documents, in-person visits in disguise, elaborate pretexts. The aim is to manipulate the human custodian of the information so that they surrender it voluntarily, thinking they are speaking to someone authorized.

Kevin Mitnick, possibly the most famous social engineer in contemporary history, documents in his books (*The Art of Deception*, 2002) how for years he compromised enormous corporate networks not with advanced computing techniques but with well-designed telephone calls. "The weakest link in any security system," writes Mitnick, "has always been the human who operates within it." The statement is empirically solid: the vast majority of corporate security breaches in the last thirty years have not been sophisticated technical attacks but variants of *phishing*, *pretexting*, and other forms of interpersonal manipulation.

Why does this matter to us in a book about CSS?

Because the social hacker is, at bottom, the closest relative of the object this book studies. The social hacker does not break mathematical codes: they manipulate systems of social communication to obtain access to information that should be protected. They work with **how we speak among humans**, with our routines of trust, with the tones that make us accept an unverified authority. CSS works the same territory from the analytical side: not to steal keys but to understand how social messages are structured in layers, who decodes what, what social functions those layers serve, and how they can be studied with rigor.

The analogy has an important nuance. The social hacker is an agent —someone who carries out a manipulation. The CSS analyst is an observer —someone who studies the patterns. But both share the fundamental intuition: that **the security or insecurity of social communication is not played out only in the content but in the im-**

plicit protocols of trust, authority, and belonging. A message may be truthful and still be entirely misinterpreted; a message may be deceptive and yet be accepted as truthful. What decides the effect is not only what is said, but how it is said, who says it, to whom, and within what frame of expectations.

The Conceptual Legacy for CSS

Let us close this chapter by gathering the concepts that the history of cryptography leaves us as inheritance for the chapters to come. They will be our working metaphors.

First, the general ciphering problem: to transmit information in such a way that only the authorized recipient can read it. In CSS, this translates to the problem of **differential reading across audiences**: a social message arrives differently to different groups by design.

Second, frequency analysis: the idea that any statistical regularity in a corpus can be exploited to break the cipher. In CSS, this translates to the computational analysis of usage patterns: corpora, co-occurrences, embeddings, detection of *bursts*.

Third, Kerckhoffs's principle: the method must be public; only the key is secret. In CSS, this translates into the requirement of **methodological transparency**: any analysis must be replicable by other researchers.

Fourth, symmetry and asymmetry: some ciphers require a shared key; others operate with divergent keys, one public and one private. In CSS, this translates to the structure of **asymmetric belong-**

ing to the in-group: possessing the interpretive key is equivalent to having a cultural or informational membership others do not possess.

Fifth, social engineering: the real security of systems is played out in the human, not the algorithmic. In CSS, this translates into the central thesis of the book: **the most effective social code is the one inscribed in everyday discursive routines**, not the one that demands technical processing. The best social cipher is the one that does not look like a cipher.

With these five concepts in hand, we are ready for the next chapter, where Claude Shannon will give us the canonical model of any communication system with secrecy: sender, message, key, channel, receiver. That model, slightly reinterpreted, will be the formal structure on which we will build all of Part II of the book.

CHAPTER 6

Sender, Channel, Key, Receiver: Shannon's Model

In 1948, a thirty-two-year-old mathematical engineer working at Bell Labs published an article titled *"A Mathematical Theory of Communication."* His name was **Claude Shannon**, and the article changed the way humanity thinks about communication. The following year, in 1949, he published an extension of those ideas applied specifically to the problem of secrecy: *"Communication Theory of Secrecy Systems."* That second article is the foundation of cryptography as a formal science. It is also, as we will see in this chapter, the most useful conceptual model we have for thinking with precision about what cryptological sociolinguistics studies.

ABOUT THIS BOOK

Cryptological Sociolinguistics

Foundations, Method, and Frontier of a Science of the Ciphered Message in Social Discourse

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Every society speaks on two levels at once. Beneath the surface of public discourse —political speeches, platform posts, market signals, ritual formulas, subcultural slang— there runs a second layer of meaning, calibrated to be legible to insiders and opaque, deniable, or invisible to everyone else. Cryptological Sociolinguistics (CSS) is the science of that second layer: how hidden messages are encoded inside ordinary ones, how they travel, how they are decoded, and how the analyst can study them without falling into paranoid over-reading.

This book is the foundational and methodological treatise of the discipline. It establishes CSS as a field in its own right by carefully demarcating it from endolinguistics on one side and from esotericism, occultism, and oracular interpretation on the other. Building on the metaphor of cryptography — Shannon, Kerckhoffs, asymmetric keys, hashes, zero-knowledge proofs, side channels, steganography— it develops a rigorous vocabulary for the codes that organize social life: dog-whistles, plausible deniability, the hide effect, algospeak and Aesopian language, cryptolects, and covert signaling.

Across six parts and twenty-nine chapters, the book moves from the problem and its theoretical canon (semiotics and hermeneutics, pragmatics, framing, the sociology of secrecy) to its fields of application: geopolitics and media cascades, platforms and AI, occult and secret groups, markets, and

subcultures. It closes with a working protocol, an ethics of interpretation, and a frank account of the discipline's limits.

Two threads run throughout. The human thread: the human mind is more fundamental than any medium that carries it. The threshold thread: CSS studies the passage between the esoteric and the exoteric without pronouncing on the internal validity of any body of knowledge. And one golden rule governs the method: *no hidden intention is attributed without falsifiable empirical evidence*.

Theoretical, didactic, and at moments philosophical, the book is written for linguists, social scientists, analysts of political and digital discourse, and any reader who suspects that what is being said is not quite what is being communicated.

HOW TO CITE

Toledo Martínez, Alejandro. 2026. *Cryptological Sociolinguistics: Foundations, Method, and Frontier of a Science of the Ciphered Message in Social Discourse*.
https://www.independentbooks.site/en/books/cryptological-sociolinguistics/

A Note on the Author

Alejandro Toledo Martínez is an independent researcher in endolinguistics, cryptological sociolinguistics, and philosophy of language. Author of more than fifty works published on ResearchGate and at endolinguistics.science, he has developed an original line of study on the binary and ternary consonantal codes of the Indo-Iranian-European system — such as the K-L-D and M-T-R ternaries — exploring their psychodynamic resonances with fundamental concepts of human thought. His work integrates deep structural linguistics, Freudian metapsychology, and ancient wisdom traditions.

He is the author of *Qualic Metaphysics: Toward an Ontology of Appearing and a Logic of Articulation* (2025) and *Disposition to Sit: Toward a Tensional Epistemology of Learning* (2026).

Cryptological Sociolinguistics founds the discipline to which this book gives its name, rigorously delimiting it from endolinguistics and from the oracular and esoteric traditions with which it shares the interest in the hidden.

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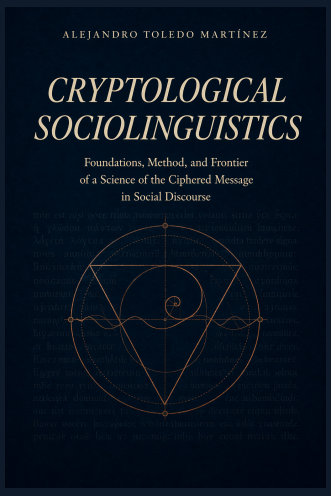

Six parts, twenty-nine chapters, a glossary, three appendices with worked examples, a full bibliography, and an analytical index.

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