

MANHAJ: A Generative Methodological Framework for Intellectual Modeling

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Methodology MANHAJ — Intellectual Modeling Methodology

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About this Paper

This paper presents a specific methodological and formal dimension of the Intellectual Modeling Methodology (MANHAJ). It examines the transition from methodological foundation to the formal representation and measurement of meaning, with particular attention to the distinction between doctrinal centrality and coordinate origin.

The paper is part of the broader MANHAJ research program and does not constitute a complete exposition of the methodology. Other theoretical, mathematical, and applied dimensions of MANHAJ are addressed or will be addressed through separate research papers.

Relationship to the MANHAJ Reference Document

This paper develops a specific research dimension of the methodology presented in:

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The present paper is an independent scientific study and should not be considered a replacement for the reference document.

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The scientific paper begins on the following page.

MANHAJ: A Generative Methodological Framework for Intellectual Modeling

Abstract

This paper presents MANHAJ (Intellectual Modeling Methodology) as a generative methodological framework for the examination and modeling of intellectual, epistemic, and human phenomena. Rather than beginning exclusively with observable outcomes and subsequently deriving interpretations from accumulated data, MANHAJ introduces a methodological examination of the foundational conditions within which inquiry itself is conducted. Central to this approach is the distinction between doctrinal centrality, which identifies the higher reference framework within which a field of inquiry is situated, and the coordinate origin, which must be explicitly established for the purpose of measurement and remain independent of the property being measured.

The paper develops the transition from this methodological foundation to a formal representation of meaning. Meaning is treated as a variable generated within a defined conceptual domain and represented as a function of an initial meaning state, temporal and spatial variables, and additional domain-specific variables. This allows a conceptual state to be represented in a three-dimensional space as $P=(t,x,M)$, where time, place, and meaning constitute the representation axes. The distinction between the representation space and the function that produces the represented meaning is maintained throughout the model.

Meaning modeling is presented here as a demonstrative case of a broader methodological architecture rather than as the complete mathematical formulation of MANHAJ. The paper further discusses the methodological status of measurement, the distinction between theoretical and empirical conditions, and the implications of making previously implicit references explicit. Particular attention is given to the methodological problem of an unexamined origin in humanities inquiry and to a possible extension of the MANHAJ approach to artificial intelligence, where a priori methodological rules could complement predominantly a posteriori data-processing approaches.

The paper concludes by identifying the scope and limitations of the present formulation and by outlining further research concerning knowledge as derivation, thought as integration, immaterial linkage, mathematical modeling, and the application of MANHAJ to artificial intelligence and domain-specific research.

Keywords: MANHAJ; Intellectual Modeling; Methodological A Priori; Doctrinal Centrality; Coordinate Origin; Meaning; Mathematical Modeling; Measurement; Humanities; Artificial Intelligence.

1. Introduction

1.1. The Methodological Problem

The study of intellectual, epistemic, and human phenomena generally begins from phenomena as they appear within an already constituted field of inquiry. Researchers identify observable facts, collect information, analyze relations among them, and construct interpretations or models on the basis of the available material. This mode of inquiry is essential for examining what has occurred or what can be observed within a given domain.

However, a methodological question precedes the analysis of the observed phenomenon: from which reference is the phenomenon being examined, and under which foundational conditions is the examination itself constructed?

A field of inquiry does not emerge in an empty conceptual space. It is situated within references, categories, values, conceptual distinctions, and implicit assumptions that determine what can be recognized as an object of study and how its properties are subsequently interpreted. When these foundational conditions remain implicit, the researcher may operate within a reference structure without explicitly identifying it.

The problem is therefore not limited to the accuracy of observations or the quality of subsequent analysis. It also concerns the construction of the frame within which observation and analysis become possible.

MANHAJ addresses this problem by introducing a methodological examination of the conditions that precede the direct examination of the phenomenon. It seeks to distinguish the higher reference framework within which inquiry is situated from the operational origin used for measurement and representation, and to make these conditions explicit before proceeding toward modeling.

In this sense, MANHAJ does not propose to replace empirical inquiry. Rather, it seeks to establish a methodological foundation through which empirical inquiry can be more explicitly situated, represented, and examined.

1.2. From A Posteriori Inquiry to the Methodological A Priori

A posteriori inquiry proceeds from what is encountered, observed, measured, or documented. It is therefore particularly effective when the research question concerns the properties, transformations, or relations of phenomena already identified within a field.

MANHAJ introduces an additional methodological movement: the a priori examination of the conditions that make the subsequent inquiry possible.

This distinction does not establish an opposition between a priori and a posteriori inquiry. Rather, it concerns their methodological order and function. An a posteriori investigation can establish characteristics of a phenomenon within a given framework, while an a priori examination asks whether the foundational reference and conditions of that framework have themselves been sufficiently identified.

This issue becomes particularly important when the reference structure of inquiry is implicit. If the investigation begins inside an already assumed conceptual or value framework, the conclusions

obtained from that framework may remain conditioned by the very reference that established the field of inquiry. The methodological question therefore becomes whether the reference from which the examination proceeds has itself been made explicit and examined.

MANHAJ addresses this question through the concept of doctrinal centrality and through the requirement of an explicit coordinate origin.

Doctrinal centrality identifies the higher framing system within which the researcher or the field is situated. It is not presented as an arbitrary choice made for each model. Rather, it is a condition that must first be recognized and identified.

The coordinate origin has a different function. It belongs to the construction of measurement and representation. It must be explicitly established according to the requirements of the research and must remain independent of the property being measured. Its role is therefore operational rather than equivalent to doctrinal centrality.

This distinction allows MANHAJ to formulate a methodological sequence in which the higher reference is identified before the operational structure of measurement is constructed.

1.3. Contribution of the Paper

The purpose of this paper is to present a specific part of the MANHAJ framework through which a methodological structure can be connected to mathematical representation and measurement.

The paper makes four principal contributions.

First, it formulates the distinction between doctrinal centrality and the coordinate origin as two different levels of methodological construction. The first concerns the higher reference framework within which inquiry takes place; the second concerns the explicit operational reference required for measurement.

Second, it develops the transition from an initial meaning state to a mathematical representation of meaning. Meaning is modeled as a function of an initial value, temporal and spatial variables, and additional variables relevant to the studied domain:

$$M = F(M_0, t, x, X_1, \dots, X_n)$$

This formulation does not claim that all determinants of meaning are exhausted by the variables presented in a particular application. Rather, it provides a formal structure within which domain-specific variables can be introduced and examined.

Third, the paper distinguishes the mathematical representation space from the function through which meaning is produced or changes. The representation of a state can be expressed as:

$$P = (t, x, M)$$

where t represents time, x represents place, and M represents the calibrated value of meaning. These axes constitute a representation structure; they should not be confused with the internal variables through which the value of meaning is produced.

Fourth, the paper examines the implications of this methodological construction for two broader fields. In the humanities, it raises the problem of an implicit and unexamined origin and the

possibility that a particular reference framework may be treated as universal without its position being explicitly established. In artificial intelligence, it identifies a possible methodological extension in which a priori rules and conditions of validity could complement approaches that predominantly process large quantities of a posteriori data.

The present paper does not attempt to provide the complete mathematical formulation of MANHAJ, nor does it develop all of its theories and laws. Its purpose is narrower: to demonstrate how MANHAJ can move from methodological foundation to formal representation and, subsequently, to the possibility of measurement and empirical investigation.

This focus also establishes a basis for subsequent studies addressing other components of the methodology, including knowledge as derivation, thought as integration, the growth of immaterial linkage, the derivation of the epistemic constant, the full mathematical structure of intellectual modeling, and the application of MANHAJ to artificial intelligence.

2. The Methodological Foundation of MANHAJ

2.1. Doctrinal Centrality

MANHAJ distinguishes between the reference framework within which inquiry is situated and the operational reference used for measurement. The first is designated as doctrinal centrality.

Doctrinal centrality refers to the higher framing system within which an intellectual or human field is constituted. It determines, at a foundational level, the general reference within which concepts, values, relations, and interpretations acquire their position. The researcher does not freely select this centrality in the same manner as an experimental parameter. Rather, it is first necessary to recognize and identify the centrality within which the field and the researcher are situated.

This distinction is important because a reference framework can remain implicit while nevertheless organizing the production and interpretation of knowledge. When such a framework is not identified, elements belonging to it may appear as neutral or universal characteristics of the phenomenon itself.

MANHAJ therefore treats the recognition of doctrinal centrality as a prior methodological operation. It does not, by itself, constitute a measurement variable or a coordinate axis. Instead, it defines the higher framing within which the subsequent conceptual and representational construction takes place.

An analogy may be drawn with an operating system in computing. A programmer developing an application operates within an environment such as Windows, Linux, or another system. The operating system is not itself one of the variables represented by the application; rather, it constitutes a higher operational framework within which the application is developed. Similarly, doctrinal centrality belongs to a level above the variables used in the representation of the phenomenon.

The methodological consequence is that the researcher must distinguish between the framework within which the inquiry is situated and the reference subsequently established for measuring the phenomenon.

2.2. The Coordinate Origin

Once the higher reference framework has been identified, MANHAJ introduces the coordinate origin as an operational requirement for representation and measurement.

The coordinate origin is the reference point from which values and changes within the research domain are determined. Unlike doctrinal centrality, it is not a higher framing system. It is an explicit methodological construction associated with the act of measurement.

For measurement to remain methodologically meaningful, the origin must be explicitly established and must be independent of the property being measured. The purpose of this independence is to

prevent the measured property from simultaneously determining the reference against which it is evaluated.

Three situations can consequently be distinguished.

In the first, the origin is entirely external to the subject being measured. This provides an independent reference for the measurement.

In the second, the origin belongs to the subject under study but is not itself the property being measured. The reference can then move with the subject, but the measurement is not necessarily circular. Its limitation is that such an origin does not provide the same capacity for absorbing measurements extending beyond the subject from which the origin was derived.

In the third, the origin is directly tied to the property being measured. In this case, the reference and the measured property become mutually dependent, producing a circular measurement structure.

The methodological issue is therefore not whether measurement can technically be performed in these three situations. Measurement may be technically possible in each case. The issue is whether the resulting measurement possesses an independent reference that allows the value obtained to be examined.

The coordinate origin may be changed during research, provided that the new origin is explicitly defined and its methodological status is made clear. What MANHAJ excludes is not the modification of the origin, but an origin that remains hidden or that derives its validity from the property whose value it is intended to establish.

2.3. Initial Meaning State

After the reference conditions and coordinate origin have been established, MANHAJ introduces an initial state for the value being studied.

In the present paper, this value is meaning, represented by M . The initial value is designated as M_0 .

M_0 = initial controlling value of meaning

M_0 is not imposed by the methodology as a universal numerical value. It is determined through the research conducted within the relevant field. Once established for a given measurement, it functions as the controlling initial value against which subsequent changes in meaning can be examined.

This distinction is important because MANHAJ provides the methodological structure of the representation, while the empirical research determines the appropriate calibration and initial values within the domain being studied.

The resulting movement can therefore be expressed conceptually as:

Doctrinal Centrality → Coordinate Origin → M_0 → Meaning Production → M → Representation
→ Measurement

This sequence establishes the transition from the methodological foundation of the inquiry to the formal examination of meaning.

The next section develops this transition by distinguishing the function through which meaning is produced from the space in which its resulting state is represented.

3. From Meaning Production to Representation

3.1. Meaning as a Multivariable Function

Once the initial meaning state M_0 has been established, MANHAJ represents the production and transformation of meaning as a function rather than as an isolated value.

A general formulation is:

$$M = F(M_0, t, x, X_1, \dots, X_n)$$

where:

- M represents the resulting meaning value;
- M_0 represents the initial controlling meaning value;
- t represents time;
- x represents place;
- $X_1, \dots, X_n$ represent additional variables relevant to the domain under investigation.

The function does not imply that time or place alone produces meaning. Rather, they constitute variables within a broader production structure in which multiple factors may participate.

The variables $X_1, \dots, X_n$ therefore remain open to determination according to the field research. They are not converted into additional representation axes simply because they may participate in the production of meaning. Their effects are condensed within the resulting value M .

This distinction allows MANHAJ to separate two questions that can otherwise be conflated:

1. How is meaning produced or transformed?
2. How is the resulting meaning represented?

The first question concerns the production function. The second concerns the representation of its resulting state.

3.2. The Three-Dimensional Representation Space

For the purpose of representation, MANHAJ uses three principal axes:

- time;
- place;
- meaning.

A state of meaning can therefore be represented by the point:

$$P = (t, x, M)$$

The point P represents the value of meaning associated with a specific temporal and spatial position within the defined research domain.

The three axes are conceptually established by the methodology, while their scales and units are determined according to the requirements of the field research.

For example, the temporal scale may be expressed in years, months, or days depending on the rate and period of change relevant to the phenomenon. Likewise, the spatial scale may concern countries, regions, or other geographical domains according to the object of research.

The meaning axis requires a corresponding process of calibration. Its scale cannot simply be imposed independently of the field under investigation. The research must determine the appropriate basis for assigning values to meaning.

Consequently, MANHAJ distinguishes between the structure of representation, which establishes the axes, and the calibration of those axes, which establishes the operational values used in a particular investigation.

3.3. Representation Space vs. Meaning-Production Function

The representation space and the meaning-production function describe different aspects of the same modeled phenomenon.

The function

$$M = F(M_0, t, x, X_1, \dots, X_n)$$

describes the production of the value M from an initial state and a set of variables.

The representation

$$P = (t, x, M)$$

places the resulting value within a defined space.

The distinction is therefore analogous to the distinction between a process and its representation. The function determines the value that is to be represented, while the coordinate system provides the structure in which that value can be located and compared.

This distinction also prevents the representation axes from being confused with the variables that determine the production of meaning. The additional variables $X_1, \dots, X_n$ may influence M without becoming additional geometric axes of the representation.

The representation is consequently a methodological construction through which the state of a concept can be located, compared, and measured without claiming that the representation exhausts the reality of the phenomenon.

3.4. Orthogonal Representation Axes and Non-Independence

For the representation developed in this paper, the three axes are treated as orthogonal axes of the representation space.

Orthogonality here concerns the geometric structure of representation. It does not mean that the corresponding dimensions are independent in the actual production of meaning.

The variables represented along the axes may interact within the production function:

$$M = F(M_0, t, x, X_1, \dots, X_n)$$

Thus, the fact that time, place, and meaning are represented as distinct axes does not imply that their underlying relations are independent in the phenomenon being studied.

This distinction is essential to the methodological use of mathematical representation. A coordinate system provides a structure for locating states and examining changes; it does not, by itself, determine the causal or productive relations that generate those states.

Accordingly, orthogonality belongs to the representation system, while interdependence belongs to the modeled relations.

The next step is to establish how the calibrated meaning axis allows changes in meaning to be represented and measured.

4. Measuring Meaning

4.1. Calibration of the Meaning Axis

The representation of meaning requires an operational scale through which different states of meaning can be assigned values and compared.

MANHAJ does not prescribe a universal scale for the meaning axis. The appropriate scale must be established through research within the domain under examination. This process constitutes the calibration of the meaning axis.

Calibration determines how the qualitative or conceptual states identified by the research are translated into values suitable for representation and measurement. The resulting scale is therefore dependent on the research domain and on the methodological criteria established for that domain.

Once the meaning axis has been calibrated and the initial value M_0 has been established, subsequent values can be represented relative to this reference.

The initial value is consequently not merely a starting number. It is a controlling reference for the measurement of change within the defined domain.

4.2. Change and Direction

Once two meaning states have been established, their variation can be expressed as:

$$\Delta M = M_1 - M_0$$

where M_0 is the initial value and M_1 is the subsequent value.

The magnitude of the change can be expressed as:

$$|\Delta M|$$

while its direction is determined by the orientation of the calibrated meaning axis.

A positive or negative variation therefore does not constitute an interpretation imposed independently of the research. Its significance depends on how the meaning axis has been calibrated within the domain under examination. For example, one direction may correspond to strengthening while the opposite direction may correspond to deviation, provided that the research has established such an orientation.

This allows MANHAJ to distinguish between the amount of change and the direction of change.

The same principle applies when the temporal or spatial position of the represented state changes. The resulting meaning value may change, remain constant, or vary according to the interaction of the variables included in the production function.

4.3. Partial Variation in a Multivariable Function

Because meaning is represented as a function of several variables,

$$M = F(M_0, t, x, X_1, \dots, X_n)$$

the effect associated with a particular variable can be examined while the other variables are held constant.

For example, the mathematical variation of meaning with respect to time or place may be expressed as:

$$\frac{\partial M}{\partial t}$$

and

$$\frac{\partial M}{\partial x}$$

These expressions provide a mathematical means of examining variation within the modeled function. They do not constitute a claim that time or place is necessarily the sole or primary producer of meaning.

The same principle can be applied to other variables when the research design requires it. The choice of the variables to be examined, the conditions under which they are held constant, and the method used to measure their effects belong to the empirical research associated with the particular domain.

Thus, the mathematical formulation establishes a structure for analysis without prescribing in advance the substantive results of the investigation.

4.4. Temporal and Spatial Change

Time and place have a dual role in the MANHAJ representation.

They are dimensions of the representation space:

$$P = (t, x, M)$$

and they are also variables within the meaning-production function:

$$M = F(M_0, t, x, X_1, \dots, X_n)$$

Consequently, a change in temporal or spatial position in the representation corresponds to a change in the corresponding variables within the function.

However, this does not mean that every change in time or place necessarily produces a measurable change in meaning. A particular investigation may yield:

$$\Delta M = 0$$

Such a result indicates that the measured meaning value remained unchanged between the examined states. It does not, by itself, establish that no internal relations or interactions occurred within the production structure.

The purpose of the present formulation is therefore not to reduce meaning to a simple temporal or spatial dependency, but to provide a formal structure in which changes in meaning can be located, compared, and measured according to the conditions established by the research.

This completes the first transition in the model:

Methodological Foundation → Meaning Function → Representation → Measurement

The next section will address the transition from this theoretical construction to empirical research, while keeping the distinction between theoretical conditions established by MANHAJ and the practical conditions required to conduct field measurements.

5. From Theoretical Model to Empirical Research

The mathematical formulation presented above establishes the theoretical conditions under which meaning can be represented and measured. It does not, by itself, constitute an empirical investigation. The transition from the theoretical model to empirical research requires the operationalization of the variables and measurement conditions within a specific research domain.

MANHAJ therefore distinguishes between theoretical conditions and empirical conditions.

5.1. Theoretical Conditions

The theoretical construction establishes the methodological sequence preceding measurement:

Doctrinal Centrality $\rightarrow$ Coordinate Origin $\rightarrow M_0 \rightarrow F(M_0, t, x, X_1, \dots, X_n) \rightarrow M \rightarrow P=(t, x, M) \rightarrow$ Measurement

At this level, the methodology determines the relations between the different components of the model.

Doctrinal centrality establishes the higher reference framework within which the inquiry is situated. The coordinate origin provides the explicit operational reference for measurement. The initial value M_0 establishes the starting state of the variable under examination. The production function provides the formal structure through which the resulting meaning value is represented, and the coordinate representation provides a means of locating that value within the defined domain.

These conditions belong to the methodological construction itself. They therefore precede the selection of a particular empirical sample or research case.

5.2. Empirical Conditions

Empirical research begins when the theoretical variables and relations are operationalized within a particular domain.

At this stage, the researcher must determine the appropriate temporal and spatial scales, calibrate the meaning axis, identify the relevant variables $X_1, \dots, X_n$, establish the initial value M_0 , and determine the procedures through which the relevant values can be observed or measured.

These decisions cannot be predetermined universally by the methodology because they depend on the phenomenon and research domain under examination.

Consequently, the empirical application of MANHAJ is not a single fixed procedure. The same methodological architecture may be deployed in different fields while requiring different operational definitions, samples, measurement procedures, and scales.

The empirical investigation therefore constitutes a domain-specific implementation of the theoretical structure rather than a modification of that structure at every measurement stage.

5.3. Measurement as a Domain-Specific Operation

A measurement performed within MANHAJ always concerns a defined research domain and a defined sample of that domain.

A measured value of meaning, for example, does not constitute a measurement of meaning in its entirety across all possible contexts. It represents the value obtained under the temporal, spatial, conceptual, and methodological conditions established for the particular investigation.

The same principle applies to other possible measurements derived from MANHAJ. A measurement of the growth of an immaterial linkage, for example, would constitute an empirical examination of that linkage under defined conditions rather than a redefinition of the underlying theoretical law.

Thus, empirical measurements are treated as instances within a larger theoretical construction.

Their function is to operationalize and examine the theoretical structure within a defined domain, rather than to redefine the theory merely because the domain or measurement conditions have changed.

5.4. Research Competence and Application

The application of MANHAJ requires researchers capable of working with its conceptual, methodological, and formal apparatus. The relevant competence is therefore not necessarily reducible to membership in a single academic discipline.

Because the methodology connects conceptual analysis with formal representation and measurement, its application may require competencies extending across several fields. Depending on the research problem, this may involve conceptual analysis, domain knowledge, mathematical representation, data analysis, or other specialized forms of inquiry.

A multidisciplinary research team may consequently be appropriate where the complexity of the research problem exceeds the competence of a single researcher.

The detailed conditions governing researcher competence, empirical protocols, and domain-specific applications fall outside the scope of the present paper. They constitute a separate area of methodological development.

The present paper is concerned primarily with establishing the theoretical transition from methodological foundation to representation and measurement. Empirical implementation is therefore treated as the subsequent stage through which this construction can be applied to specific research problems.

6. Methodological and Epistemic Status of Measurement

The measurements produced through the MANHAJ framework must be understood according to their position within the larger methodological construction. A measured value is not, by itself, equivalent to a theory, a law, or a complete description of the phenomenon under investigation.

6.1. Measurement as an Output of the Model

Within the structure presented in this paper, measurement occurs after the methodological reference, coordinate origin, initial state, production function, and representation have been established.

The measured value is therefore an output obtained under defined conditions.

For meaning, for example, the difference between two measured states may be expressed as:

$$\Delta M = M_1 - M_0$$

This value describes the measured variation within the defined research domain and under the conditions established by the investigation.

It does not, by itself, redefine the theoretical construction from which the measurement was derived.

6.2. Measurement and Theoretical Components

MANHAJ distinguishes between different types of methodological components. Definitions, concepts, theories, laws, mathematical formulations, mechanisms, models, hypotheses, and empirical measurements do not possess the same methodological status.

Consequently, an empirical measurement of meaning should not be confused with the Theory of Meaning, just as a particular measurement of an immaterial linkage should not be confused with the theoretical formulation of the Law of Exponential Growth of Immaterial Linkage.

The measurement constitutes an application of the theoretical structure within a defined domain.

This distinction is necessary because a measurement is necessarily associated with particular conditions. Changing the research domain, sample, temporal range, spatial range, or calibration may produce a different measured value without thereby constituting a contradiction of the general methodological framework.

6.3. Measurement as a Sample of a Larger Construction

A research measurement represents a limited instance within a broader theoretical construction.

For example, the value obtained for meaning in a particular context may depend on the initial state M_0 , the temporal and spatial conditions, and the additional variables included in the research:

$$M = F(M_0, t, x, X_1, \dots, X_n)$$

The resulting value is therefore associated with the specific conditions under which it was obtained.

This also means that a measured value should not automatically be generalized beyond the domain for which the measurement was constructed. The measurement provides evidence concerning the defined research situation; broader generalization requires its own methodological and empirical justification.

6.4. A Constant Measured Value

An important consequence of this distinction concerns the case in which:

$$\Delta M = 0$$

A zero variation means that the measured value of meaning remained constant between the states examined.

It does not necessarily mean that no relations, interactions, or internal movements occurred within the production structure. Different processes may produce a resulting value that remains unchanged at the level of the measured variable.

The distinction is therefore maintained between the observed result and the internal production structure represented by the function.

This prevents the absence of measurable variation in one variable from being interpreted automatically as the absence of all underlying dynamics.

6.5. The Contextual Character of Measurement

Measurement in MANHAJ is consequently always associated with a defined domain of inquiry.

A statement such as “the meaning has a value of M” has methodological significance only when the conditions under which that value was established are known. These include, according to the research design, the coordinate origin, initial state, temporal and spatial position, calibration of the meaning axis, and relevant variables.

The result is therefore neither an unrestricted value nor a value detached from its methodological construction.

This contextual character does not diminish the role of measurement. On the contrary, it specifies the conditions under which a measurement can legitimately be interpreted and compared.

The methodological structure developed so far can thus be summarized as:

Reference → Origin → Initial State → Production Function → Representation → Measurement → Domain-Specific Result

This establishes the basis for examining what MANHAJ adds methodologically, particularly with regard to the implicit origin problem in the humanities and the possible extension of a priori methodological evaluation to artificial intelligence.

7. Discussion: What Does MANHAJ Add?

The methodological construction presented above leads to questions that extend beyond the formal representation of meaning itself. In particular, it raises the question of what changes when the foundational conditions of inquiry are made explicit before the phenomenon is measured.

Two implications are particularly significant: the treatment of the implicit origin in humanities inquiry and the possible application of an a priori methodological structure to artificial intelligence.

7.1. The Problem of the Implicit Origin in the Humanities

Humanities research does not ordinarily formulate its methodological foundations in terms of a coordinate origin. Nevertheless, an inquiry may operate from an implicit reference point that determines how the object of study is framed, classified, and interpreted.

When such a reference remains unexamined, the researcher may treat its resulting categories or values as properties of the phenomenon itself rather than as elements associated with the framework from which the phenomenon is being examined.

The methodological problem is therefore not that humanities research explicitly declares a universal coordinate origin. Rather, it is that the function performed by such an origin may remain implicit and unexamined.

From the perspective of MANHAJ, this creates three related risks:

1. the reference may remain hidden;
2. the reference may be dependent on the subject being examined;
3. values associated with a particular reference framework may consequently be presented as if they were independent or universal.

The issue is especially important when the reference used to examine a phenomenon is derived from the same conceptual structure that defines the phenomenon. In such a case, the subject itself may become the source of the reference used to evaluate it. For example, human desire, human benefit, human interest, or a conception of what is considered good for human beings may be used not merely as objects of study, but as implicit standards for determining what is valuable, rational, desirable, or beneficial. The subject is then simultaneously the object being examined and the source of the criteria by which it is evaluated.

In such a configuration, the distinction between the object of examination and the reference used to evaluate it becomes methodologically difficult to maintain. The resulting reference may appear universal while actually being derived from a particular conception of the subject itself. From the perspective of MANHAJ, this is precisely the type of implicit reference that requires methodological examination before the resulting values can be treated as independent measurements.

MANHAJ responds by requiring the operational origin to be explicitly identified and by distinguishing it from the property being measured.

7.2. From Hidden Reference to Explicit and Independent Measurement

The introduction of an explicit coordinate origin changes the methodological status of measurement.

Instead of allowing the reference to remain embedded within the object of inquiry, the researcher identifies the origin before assigning and comparing values. The origin can then be examined independently of the measured property.

This does not imply that a single origin is universally valid for every research problem. Different investigations may require different origins. What is methodologically important is that the origin be explicit, justified by the research, and distinguishable from the property being measured.

The same principle applies to the calibration of the meaning axis. The methodology establishes the existence of the axis, while the research determines how that axis is calibrated for the particular domain.

This separation introduces a distinction between reference conditions and measured properties.

Such a distinction is central to the MANHAJ approach because it allows the researcher to examine not only the measured phenomenon, but also the methodological conditions under which its measurement has been constructed.

7.3. From A Posteriori Data Processing to A Priori Validity Evaluation in AI

A second possible implication concerns artificial intelligence.

Contemporary AI systems can process very large quantities of data and derive patterns, classifications, predictions, or probabilistic evaluations from those data. This represents a powerful form of a posteriori processing: the system operates on information that has already been produced and uses statistical or computational procedures to derive outputs from it.

MANHAJ suggests a different methodological possibility: complementing such posterior processing with an a priori layer of methodological rules.

Under this approach, an AI system would not rely exclusively on patterns derived from accumulated data. It could also incorporate explicitly defined rules concerning meaning, reference, validity, and the conditions under which a result should be considered methodologically sound.

The conceptual movement can therefore be expressed as:

Data → Pattern → Probability/Evaluation

compared with a possible MANHAJ-oriented movement:

Methodological Rules → Evaluation Conditions → Case Examination

The latter does not imply the elimination of data-driven processing. Rather, it suggests an additional methodological layer through which an AI system could evaluate cases against previously established rules and conditions.

One possible consequence would be the development of systems capable of producing a form of methodological self-evaluation, in which an output is examined not only according to patterns learned from data but also according to explicit conditions of validity and rightness.

This remains, in the present paper, a methodological possibility rather than a demonstrated technical implementation. Its development would require a separate investigation addressing the formalization of MANHAJ rules within computational systems and the practical conditions necessary for their implementation.

The two implications discussed here therefore converge on the same methodological principle: making the conditions of evaluation explicit rather than leaving them entirely embedded within the process through which the result is produced.

8. Scope and Limitations

This paper presents a specific methodological and formal dimension of MANHAJ rather than the complete methodology in all of its theoretical and operational developments. Its primary objective is to demonstrate how an intellectual phenomenon can be approached through an explicit methodological foundation, transformed into a formal structure, represented mathematically, and subsequently made available for measurement.

The paper therefore focuses on the transition from methodological foundation to representation and measurement, using meaning as a demonstrative case.

Several limitations should consequently be made explicit.

First, the paper does not attempt to provide a complete exposition of all MANHAJ theories and laws. The three founding theories and the methodological laws constitute a broader architecture that cannot be fully developed within a single paper without losing the specific focus of the present study.

Second, the mathematical formulation presented here is not intended to constitute the complete mathematical theory of intellectual modeling. The function

$$M = F(M_0, t, x, X_1, \dots, X_n)$$

provides a formal structure for examining meaning, while the determination of the relevant variables, scales, calibration procedures, and measurement protocols remains dependent on the research domain.

Third, the paper does not present a complete empirical study. The transition from theoretical formulation to field research has been described methodologically, but no particular empirical dataset is used here to establish a definitive measurement of meaning.

Fourth, the paper does not attempt to develop the full mathematical treatment of other major MANHAJ components, including knowledge as derivation, thought as integration, or the exponential growth of immaterial linkage. These subjects require separate investigations because each introduces its own theoretical and formal development.

Finally, the discussion of artificial intelligence remains methodological. The paper identifies the possibility of introducing an a priori layer of methodological rules into AI systems, but it does not present a technical implementation or claim that such a system has already been constructed and empirically validated.

These limitations are intentional. The purpose of the present paper is to establish and demonstrate a methodological pathway:

Reference → Origin → M_0 → Production → Representation → Measurement

The concrete transformation of specific human phenomena into operational research scales and measurement procedures constitutes the next level of application and requires domain-specific studies.

9. Research Directions

The methodological structure developed in this paper opens several directions for further research. These directions are not presented as extensions that are already empirically established, but as research programs through which the different components of MANHAJ can be further developed and examined.

9.1. From Human Phenomena to Operational Research Scales

A central direction concerns the transformation of subjects traditionally studied qualitatively in the humanities into explicit methodological structures that can be examined and measured.

Such research would begin by identifying the relevant reference framework and coordinate origin, defining the conceptual domain, establishing the initial state, and determining the variables and calibration procedures required for the specific subject.

The objective is not to reduce human phenomena to a predetermined numerical scale. Rather, it is to determine whether a phenomenon can be represented through an explicit methodological structure and, where appropriate, transformed into an operational scale of examination.

This direction is particularly important for contemporary humanities research, where concepts such as human interest, human benefit, desire, value, identity, freedom, justice, or social progress may function simultaneously as objects of inquiry and as implicit criteria of evaluation. When the criterion used to evaluate the phenomenon is derived from the same conceptual framework that defines the phenomenon, the inquiry can logically become circular: the subject provides the reference by which the subject itself is subsequently evaluated. The reference is therefore not independently established but is reproduced through the very system that it is supposed to examine. In practical terms, this can lead to a methodological impasse in which humanities fields repeatedly produce interpretations from within their own inherited conceptual frameworks without being able to establish an independent reference from which those frameworks themselves can be examined. The problem is therefore not merely that the reference remains implicit; it is that the absence of an independently established reference can constrain the capacity of the field to critically examine the foundations from which its own concepts and evaluations are produced.

Future studies should therefore provide concrete models showing how a humanistic subject is transformed into a methodological measuring instrument, rather than limiting the analysis to a theoretical description of the process.

9.2. Knowledge as Derivation

A second direction concerns the formalization of knowledge as a derivational movement from a reference toward its details.

This research would examine how knowledge can be represented as a process of deriving meanings and relations from an established reference, and how such derivations can subsequently be represented and examined within the MANHAJ framework.

9.3. Thought as Integration

A complementary direction concerns thought as an integrative movement.

Where knowledge proceeds through derivation toward details, thought reconnects domains and details to a broader foundation. Further research can therefore investigate the mathematical and methodological conditions under which this integrative movement can be represented without reducing it to a simple aggregation of information.

9.4. Exponential Growth of Immaterial Linkage

The Law of Exponential Growth of Immaterial Linkage constitutes another independent research direction.

Its theoretical formulation and its mathematical representation require a dedicated study capable of examining the conditions under which the growth of immaterial relations can be identified, represented, and empirically measured.

9.5. MANHAJ and Artificial Intelligence

The possible integration of MANHAJ with artificial intelligence constitutes a further research direction.

A dedicated study could investigate how a priori methodological rules concerning meaning, reference, and conditions of rightness could be formally represented within AI systems and used alongside data-driven processing.

Such research would move beyond the conceptual possibility identified in this paper toward questions of formalization, computational implementation, testing, and evaluation.

9.6. The Mathematical Structure of Intellectual Modeling

A broader research program is also required to develop the mathematical structure of intellectual modeling itself.

The present paper establishes only one path from conceptual structure to mathematical representation. Further work can examine the mathematical relations among the different components of MANHAJ and determine which aspects can be formally represented, measured, simulated, or algorithmically implemented.

9.7. Conditions of Application and Research Competence

Finally, further research should establish the conditions required for the practical application of MANHAJ.

This includes the competencies required of researchers, the organization of multidisciplinary research teams where necessary, the construction of domain-specific measurement protocols, and the criteria for evaluating the adequacy of a methodological scale to the phenomenon under examination.

These research directions preserve the distinction established throughout this paper between the general methodological framework and its domain-specific applications. They also provide a path for moving from the theoretical architecture presented here toward concrete studies in the humanities, social sciences, mathematical modeling, and artificial intelligence.

10. Conclusion

This paper has presented MANHAJ as a generative methodological framework for intellectual modeling, with particular attention to the transition from methodological foundation to formal representation and measurement.

The analysis began from a methodological question that precedes the direct examination of a phenomenon: from which reference is the phenomenon being examined, and under which conditions is that reference established? MANHAJ addresses this question by distinguishing between doctrinal centrality and the coordinate origin. Doctrinal centrality identifies the higher framing system within which inquiry is situated, while the coordinate origin provides an explicit operational reference for measurement.

This distinction makes it possible to examine a problem that may remain implicit in humanities inquiry: the possibility that the reference used to evaluate a phenomenon is derived from the same conceptual structure that defines the phenomenon. When the subject becomes the source of its own evaluative reference, the inquiry can logically become circular. In practical terms, this may contribute to a methodological impasse in which a field remains largely within inherited conceptual frameworks without establishing an independent reference from which those frameworks themselves can be examined.

The paper then demonstrated how, once the methodological conditions have been established, a phenomenon such as meaning can be transformed into a formal structure:

$$M = F(M_0, t, x, X_1, \dots, X_n)$$

and represented as:

$$P = (t, x, M)$$

The distinction between the production function and the representation space is essential to this construction. The former describes the relations through which meaning is produced or transformed, while the latter provides a structure in which the resulting state can be located and compared.

Measurement consequently appears not as an isolated numerical operation, but as the final stage of a methodological sequence:

Reference $\rightarrow$ Origin $\rightarrow$ M_0 $\rightarrow$ Production $\rightarrow$ Representation $\rightarrow$ Measurement

The meaning model developed in this paper is therefore not intended to constitute the whole mathematical structure of MANHAJ. It serves as a demonstrative case showing how an intellectual phenomenon can move from a methodological foundation toward formal representation and domain-specific measurement.

The paper also identified two broader areas of significance. In the humanities, MANHAJ provides a framework for making implicit references explicit and for examining the independence of the reference used in evaluation. In artificial intelligence, it suggests the possibility of complementing predominantly a posteriori data processing with an a priori methodological layer based on explicitly defined rules and conditions of evaluation.

These possibilities remain open research directions rather than completed empirical results. Their development requires further theoretical formalization, domain-specific research, mathematical development, and technical implementation.

The broader contribution of MANHAJ therefore lies not in proposing a single model for a single phenomenon, but in establishing a methodological architecture through which intellectual phenomena can be examined from their foundational references, represented through explicit structures, and, where appropriate, transformed into objects of measurement.

Further research will determine the extent to which this architecture can be operationalized across different fields of the humanities and beyond, and how its theoretical components can be developed into concrete research instruments and computational systems.

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12. References

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