

The questions of observation. Expanding the dimensions of meaning in Niklas Luhmann's theory programme

Steffen Roth, Excelia Business School, France, and University of Cambridge, United Kingdom. Email: sr2156@cam.ac.uk

Michal Kaczmarczyk, University of Gdansk, Poland. Email: michal.kaczmarczyk@ug.edu.pl

Recommended citation: Roth S. and Kaczmarczyk M. (2026). The questions of observation. Expanding the dimensions of meaning in Niklas Luhmann's theory programme. Manuscript, DOI: 10.13140/RG.2.2.19724.99203.

Abstract:

Purpose: This article revisits the concept of meaning in Niklas Luhmann's theory programme and addresses the unresolved question of why meaning should have precisely three dimensions. It proposes a systematic expansion of the triadic model to a six-dimensional architecture grounded in the concept of basic questions and their capacity to orient observation.

Design/methodology/approach: The article reconstructs Luhmann's three dimensions of meaning—factual, temporal, and social—in terms of the basic questions *what*, *when*, and *who*. Building on this reconstruction, it develops an extended framework that incorporates three additional dimensions—spatial, modal, and motivational—linked to the questions *where*, *how*, and *why*. Each dimension is associated with a characteristic code and a specific focus of observation.

Findings: The analysis shows that the dimensionality of meaning can be systematically derived from the basic questions of observation. This allows Luhmann's triad to be understood not as an arbitrary choice but as a reduced form of a broader schema. The proposed sixfold

architecture outlines a more comprehensive framework for analysing meaning, suggesting the existence of further theoretical sub-programmes beyond differentiation, evolution, and communication theory.

Originality: By linking the architecture of meaning to the logic of questioning, this article offers a novel rationale for both the established triad and its expansion. It provides social systems theorists with a systematic basis for extending the concept of meaning, and it opens new directions for theory-building by pointing to additional sub-theories that remain to be developed.

Keywords: Differentiation, evolution, communication, change, basic questions, theoretical programmes.

Paper type: General Review

1 Introduction

The concept of meaning has long been recognised as a cornerstone of Niklas Luhmann's social systems theory. Meaning provides the medium in which both psychic and social systems operate, structuring selections and stabilising horizons of reference. Yet while Luhmann confidently distinguished three dimensions of meaning—factual, temporal, and social—he also admitted that he could not justify why there should be precisely three. This unresolved issue raises a fundamental problem for systems theory: is the triadic architecture of meaning complete, or is it only a first step toward a more comprehensive framework?

Addressing this problem matters for both theory and practice. In theoretical terms, the dimensionality of meaning determines the scope of systems theory itself (Kaczmarczyk, 2025), since each dimension is tied to a characteristic code and a corresponding sub-programme of research. In practical terms, meaning structures every act of observation, communication, and

organisation; expanding its architecture could therefore reshape the analytical tools available for both sociological inquiry and applied systems thinking.

The state of knowledge remains divided. Luhmann (1995, 2012, 2013) elaborated the threefold scheme and its sub-theories of differentiation, evolution, and communication. Subsequent systems theorists have largely accepted this triad, while occasionally noting its unresolved justification. More recently, attempts have been made to reconstruct the logic of the three dimensions by linking them to the basic questions *what*, *when*, and *who* (Roth, 2021). This reconstruction not only explains the triad but also opens the possibility of expanding the architecture further (Roth et al., 2025).

This raises the central research question: can the dimensions of meaning be systematically extended beyond Luhmann's original triad by linking them to the broader set of basic questions?

In response, this research note makes two contributions. First, it revisits the Luhmannian concept of meaning, reconstructing its three dimensions in terms of the basic questions that orient observation. Second, it proposes a systematic expansion of this architecture to six dimensions of meaning, each associated with a basic question, a code, and a specific focus of observation.

The article is structured as follows. Section 2 outlines the concept of meaning in Luhmann's work. Section 3 reconstructs the threefold structure of meaning in terms of basic questions. Section 4 expands this architecture to six dimensions. Section 5 concludes by summarising the main takeaways and outlining three directions for future research.

2 Meaning in the work of Luhmann

Niklas Luhmann (1995; 2012) places the concept of meaning at the centre of his theory of social systems. Meaning is the medium in which both psychic and social systems operate, the condition that allows selections to be made and stabilised. Every psychic or social operation—every thought and every communication—presupposes meaning as its horizon. This horizon is inexhaustible in the sense that it always offers further possibilities of reference, but it is also inescapable in that nothing can. As Luhmann (1995, p. 62) emphasises, even the concept of meaninglessness has meaning, because even the negation of sense can only be processed as meaningful event. Meaning thus provides the fundamental condition for the autopoiesis of both psychic and social systems, serving as their shared medium: while psychic systems think and social systems communicate, both operate by reducing complexity within horizons of meaning. The general code of meaning is the distinction between actuality and potentiality (Luhmann, 1995, p. 74). Any act of thinking or communication actualises one possibility while simultaneously holding open further possibilities that remain unselected. Meaning therefore never exhausts itself in what is presently actualised but always contains a reference to potential alternatives. In this sense, the code of actual/potential constitutes the “source code” of meaning, which is then further differentiated into distinct dimensions.

Within this framework, Luhmann identifies three different dimensions of meaning: the factual, the temporal, and the social. Each dimension specifies a distinct horizon against which selections can be made, and each can be associated with a characteristic code.

- The factual dimension answers the question of *what* is thematised. It is oriented by the code this/that (Luhmann, 1995, p. 74), distinguishing one object, issue, or theme from others.
- The temporal dimension concerns *when* something occurs. Its basic code is before/after, with every present moment constituted as the difference between past and future or before and after, respectively (Luhmann, 1995, p. 77; Luhmann 2012, p. 23, p. 86).
- The social dimension structures meaning in relation to *who* participates. It is oriented by the code ego/alter (Luhmann, 1995, p. 91), presupposing at least two observers and thus the possibility of communication.

These three dimensions are not merely descriptive; each has been elaborated by Luhmann into a distinct theoretical sub-programme. The factual dimension provides the foundation for his theory of social differentiation, which explains how society organises itself through functional, stratified, or segmented distinctions. The temporal dimension underlies his theory of evolution, which accounts for the emergence, reproduction, and transformation of social forms. The social dimension grounds his theory of communication, which analyses how double contingency and reciprocal expectations structure communicative processes.

Taken together, the three dimensions and their associated theoretical subprogrammes can be represented as a triangular architecture that can be applied to any form of observation, including the observation of observation (Figure 1).

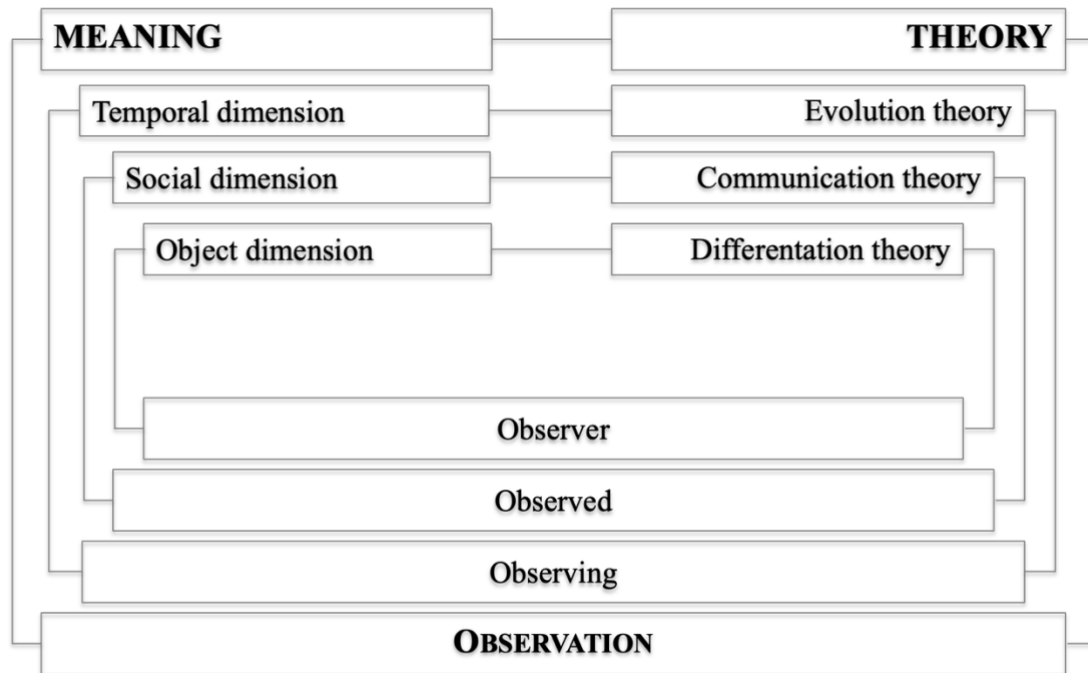


Figure 1: The three dimensions of meaning and respective sub-theories as applied to the observation of observation (authors provided).

As illustrated in Figure 1, any observation can be differentiated with regard to its observer (social dimension, code: ego/alter), its object of observation (factual dimension, code: this/that), and the process of observing (temporal dimension, code: before/after).

3 Questioning the dimension of meaning

While Luhmann confidently distinguished three dimensions of meaning—factual, temporal, and social—he admitted that he remained unable to provide a rational justification for why there should be precisely three (Luhmann, 1995, p. 173). Subsequent systems theorists have

attempted to reconstruct the logic of this triad. One such reconstruction is to see the three dimensions as corresponding to the basic questions of observation: *what*, *when*, *who* (Roth, 2021). From this perspective, the threefold structure of meaning can be seen not as an arbitrary choice, but as grounded in the very logic of questioning that underlies all observation.

Interestingly, Luhmann (1995, p. 91; 2013, p. 174) also refers to the “fact dimension” using the distinction between internal and external, most likely because he believed that “space cannot be separated from the object dimension” (1995, p. 173). This assessment, however, would also apply to time, since one needs to know not only *what* is happening but also *where* and *when* before one can determine what is actually going on.

These considerations show that there is a clear link between the three meaning dimensions and three out of the larger set of basic questions: *what* (factual), *when* (temporal), and *who* (social). As there are more basic questions than these three, there is good reason to assume that further dimensions of meaning may be systematically explored. Roth (2021) already suggested that Luhmann’s triad can be reconstructed in terms of basic questions and thus provides a rationale for considering additional dimensions. Roth et al. (2025) extended this reasoning by explicitly pointing to the possibility of expanding the set of meaning dimensions in line with the wider set of basic questions.

From this perspective, Luhmann’s threefold schema should be seen not as a final architecture but as an initial form of a possibly broader framework. The following section therefore develops the expansion prefigured in these earlier contributions, moving from three to six dimensions of meaning.

4 Expanding the dimensions of meaning

If the three dimensions of meaning identified by Luhmann can be linked to the basic questions *what*, *when*, and *who*, then it is natural to ask whether the broader set of basic questions might also correspond to further meaning dimensions. From this perspective, the triadic structure of meaning is not arbitrary but a reduced form of a more encompassing architecture.

Building on this intuition, we propose to expand Luhmann's three dimensions into a sixfold schema of meaning. Each dimension is oriented by one of the six basic questions—*where*, *when*, *what*, *who*, *how*, and *why*—and each can be associated with a characteristic code and a specific focus of observation. The result is summarised in Table 1.

Meaning Dimension	Basic Question	Code	Focus
Spatial	<i>Where?</i>	here/there	The locus of observation
Temporal	<i>When?</i>	before/after	The process of observation
Factual	<i>What?</i>	this/that	The object of observation
Social	<i>Who?</i>	ego/alter	The observer
Modal	<i>How?</i>	thus/otherwise	The manner of observation
Motivational	<i>Why?</i>	intent/accident	The purpose of observation

Table 1: Six dimensions of meaning as oriented by basic questions, codes, and observational foci

The table shows how the six basic questions can be mapped onto distinct dimensions of meaning.

The spatial dimension, oriented by the question *where?*, is coded by the distinction here/there and directs attention to the locus of observation. Alternative options for the code of the spatial

dimension, such as internal/external Luhmann (1995, p. 91; 2013, p. 174), may be considered as specifications or, with regard to the focus of observation, as variants of here versus there.

The temporal dimension, already familiar from Luhmann's framework, corresponds to the question *when?* and is coded before/after, focusing on the process of observation across time. Again, alternative options such as past/present do not appear incompatible. The factual dimension answers the question *what?* by distinguishing this/that, identifying the object of observation.

The social dimension, linked to the question *who?*, is coded ego/alter and highlights the observer as a participant in communication.

To these four, the expansion adds two further horizons. The modal dimension, linked to the question *how?*, is coded thus/otherwise and specifies the manner in which something is observed—whether in a particular way or in some alternative manner.

Finally, the motivational dimension, linked to the question *why?*, is coded intent/accident and directs attention to the purpose of observation, distinguishing between intentional and accidental orientations.

Taken together, these six dimensions sketch a more comprehensive architecture of meaning than Luhmann's original triad. Each dimension clarifies a specific horizon against which observation becomes possible, and each introduces a code that structures how selections are stabilised. This suggests that the logic of questioning provides a systematic path for extending the concept of meaning beyond its established threefold form.

5 Conclusions

This article has revisited the concept of meaning in Luhmann's theory of social systems and proposed its expansion from three to six dimensions. While Luhmann identified the factual, temporal, and social dimensions of meaning, each associated with a specific code and theoretical sub-programme, we have argued that these can be systematically related to the basic questions *what*, *when*, and *who*. Extending this logic to the broader set of basic questions yields three further dimensions—spatial (*where?*), modal (*how?*), and motivational (*why?*)—each likewise grounded in a characteristic code and focus of observation. Together, these six dimensions outline a more comprehensive architecture of meaning and a promising framework for further systems-theoretical development.

Several lines of future research follow from this proposal.

First, there is a need for a more in-depth analysis of the intricate relationship between questions and meaning, and in particular the remarkable power of questions to reveal unexplored dimensions of meaning by opening new dimensions of observation.

Second, the inter-reducibility of the dimensions requires further inquiry. Future work could explore whether there exist hierarchies of questions, or whether the codes of one or several dimensions are capable of generating those of another, as suggested in earlier explorations of the generative power of distinctions to produce distinctions (Roth, 2023, see Table 4).

Third, the proposed expansion is also significant because it transforms the abstract opposition of actual/potential into a concrete, operational research programme. Each additional dimension introduces a distinct analytical axis for mapping the landscape of the unchosen. The modal dimension (*how?*; *thus/otherwise*), for example, provides a direct tool for counterfactual inquiry, prompting us to investigate systematically in what other way a given process could have unfolded. The motivational dimension (*why?*; *intent/accident*) opens up the horizon of

alternative purposes, allowing us to distinguish between unrealised intentions and unforeseen possibilities. Finally, the spatial dimension (where?; here/there) highlights how context structures possibilities, raising the question of why an event was actualised here rather than elsewhere.

Fourth, in addition to these three additional basic questions, reference to yet other questions might open up still more horizons of meaning. If the sixfold schema presented here is not exhaustive, then future inquiry may discover additional dimensions, each linked to questions that have not yet been systematically considered. Such an extension would deepen the connection between questioning and meaning, and it would broaden the space for theorising beyond even the expanded architecture outlined in this article.

Finally, if the original three dimensions can indeed be associated with Luhmann's theoretical substreams—evolution theory (temporal), communication theory (social), and differentiation theory (factual)—then the additional dimensions may point toward the need for further sub-theories of social systems still to be discovered and elaborated.

The discovery and development of such additional sub-theories would be a worthy challenge for contemporary social systems theorists—and a major step forward in advancing the programme of systems theory.

References

- Kaczmarczyk, M. (2025). [The reality of environment reimaged: Niklas Luhmann and the new ecological paradigm](#). *Systems Research and Behavioral Science*, 42(2), 327-337.
- Luhmann, N. (1995). *Social systems*. Stanford: Stanford University Press.
- Luhmann, N. (2012). *Theory of Society, Volume I*. Stanford: Stanford University Press.
- Luhmann, N. (2013). *Introduction to Systems Theory*. Cambridge: Polity Press.
- Roth, S. (2021). [Draw your organization! A solution-focused theory-method for business school challenges and change](#). *Journal of Organizational Change Management*, 34(4), 713-728.
- Roth, S. (2023). [Digital transformation of management and organization theories: A research programme](#). *Systems Research and Behavioral Science*, 40(3), 451-459.
- Roth, S., Watson, S., Dahms, H. F., & Atanesyan, A. (2025). [Guiding distinctions of social theory. Analogue guidelines or digital transformers? An introduction](#). *Current Sociology*, 73(4), 477-492.