

# From Intuition to Explanation

## *How Belief Systems Form*

John A Challoner, February, 2026

### **Abstract**

Humans frequently experience a sense that things are connected before they can explain how. This paper argues that such experiences arise from normal cognitive processes in which patterns are detected below the level of conscious awareness and are then presented to consciousness as a felt sense of coherence. This sense of connectedness creates a need for explanation, and the explanations constructed depend on the conceptual tools, language, and informational environment available at the time.

Viewed in this way, religious, metaphysical, early systems, and modern scientific accounts can be understood as historically situated attempts to explain the same underlying cognitive experience. The resemblance between these accounts is therefore not coincidental but arises from shared perception of genuine patterns in the world expressed through different explanatory idioms.

The paper draws on established theories of consciousness, cognitive psychology, and social construction to propose a general model of how belief systems form. It concludes by exploring the implications of this model for communication and education, suggesting practical ways in which dialogue across differing explanatory frameworks can be improved without requiring individuals to abandon their preferred idioms.

### **1. Introduction**

Most people can recall moments when they felt that things were related before they knew why. We may have a strong intuition that two events are connected, feel that a situation “makes sense” without knowing why, or experience a sense of coherence that precedes explanation. Such experiences are often described as intuition, insight, or, in some traditions, as a feeling of spiritual connectedness.

This paper begins from the observation that these experiences are not unusual or mysterious, but a normal feature of how the human mind operates. Modern cognitive science suggests that much pattern recognition occurs below conscious awareness. What reaches consciousness is not the process of detection itself, but the result: a felt sense that things fit together.

This sense of connectedness does not remain neutral. Humans are strongly motivated to explain it. The explanations that are constructed, however, depend on the conceptual tools, language, and knowledge available at the time, as well as the informational environment in which individuals live. As a result, different cultures and historical periods have produced very different explanatory systems to account for similar perceived patterns.

Seen in this light, religious, metaphysical, early systems, and modern scientific explanations can be understood as responses to the same cognitive experience expressed through different idioms. This perspective helps to explain why such accounts often resemble one another, why people can be deeply attached to them, and why communication across different explanatory frameworks can be so difficult.

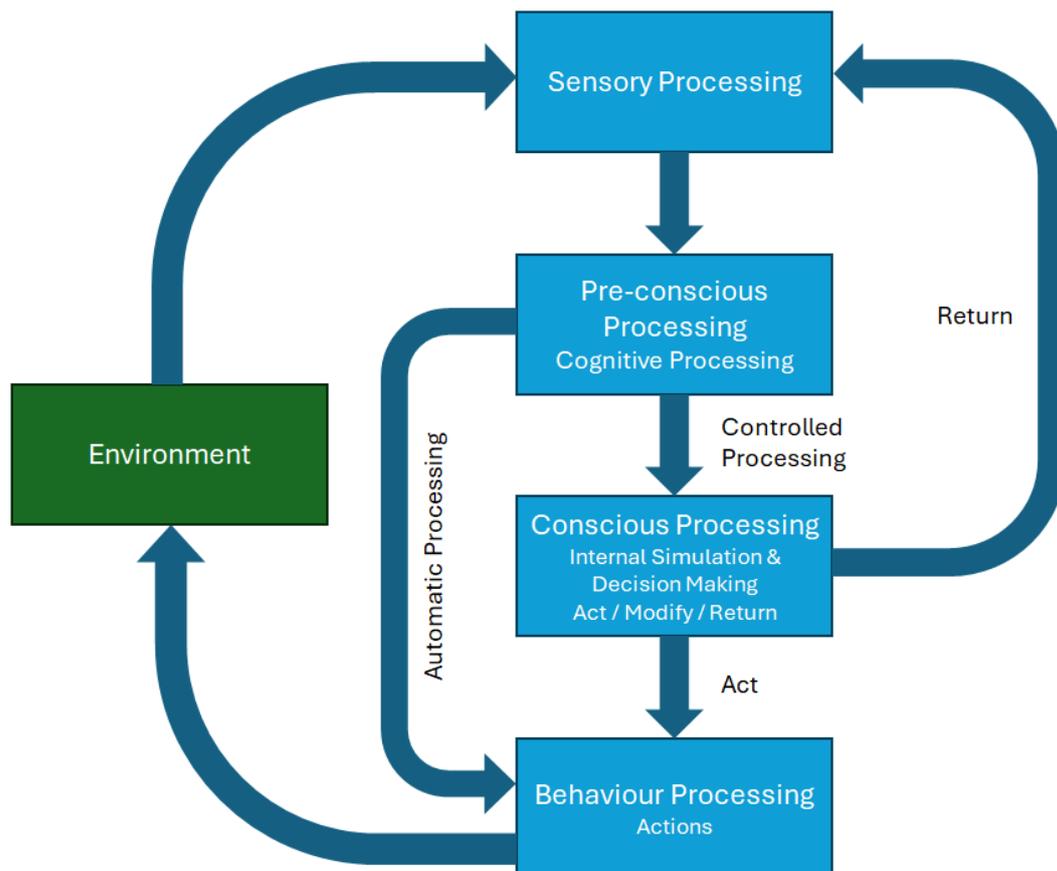
The purpose of this paper is to develop a simple model of how this process occurs and to explore its implications for communication and education. By recognising the distinction between the perception of connectedness and the explanations built upon it, it becomes possible to improve dialogue without dismissing the experiences from which those explanations arise.

## 2. Why We Sense Patterns Before We Can Explain Them — A Simple Model of Consciousness

To understand why humans often experience a sense that “things are connected” before they can explain how, it is helpful to consider a simple model of how conscious and unconscious processes interact.

Most cognitive processing takes place outside conscious awareness. The brain is continuously receiving sensory input from the environment and detecting patterns, regularities, and anomalies using processes of which we are unaware. What we experience consciously is not this processing itself, but selected results of it when they are fed back into systems responsible for perception, internal simulation, and decision making.

This feedback creates the familiar experience of intuition or insight: a feeling that something fits together without an immediate explanation.



*Figure 1. Simplified model of human cognition showing how sensory input is interpreted by pre-conscious processing and selectively presented to conscious awareness before behaviour occurs.*

A simplified way to think about this is as four interacting functions:

1. **Sensory processing** — where information from the environment is received.
2. **Pre-conscious cognitive processing** — where pattern recognition, memory integration, and interpretation occur outside awareness.
3. **Conscious processing** — where internal simulation, evaluation, and decision making take place.
4. **Behaviour processing** — where actions are carried out.

These functions are connected by feedback loops.

Importantly, sensory input does not pass directly into conscious awareness. It is first interpreted and filtered by pre-conscious cognitive processing. Most of the time, this processing is sufficient to guide behaviour without any need for conscious involvement. This is why we can drive a familiar route on “autopilot” or perform well-practised tasks without thinking about them.

However, when pre-conscious processing detects something unexpected, significant, or difficult to interpret, for example, the flick of a curtain in a window or a sudden hazard on the road, it passes this on to conscious processing. Conscious attention is then engaged.

In this sense, we are not aware of most of what we perceive. We become aware only when unconscious processing determines that conscious evaluation is required.

Once conscious processing is engaged, potential actions are internally simulated before they occur. We can “hear” words before speaking them, “see” actions before performing them, and “feel” their likely consequences. This internal simulation is what we experience as conscious awareness.

At this point, the conscious system performs a crucial role. It does not merely observe proposed behaviour. It can:

- approve it,
- modify it,
- delay it, or
- return it for further unconscious processing.

In effect, the conscious mind acts as a regulator within the loop. It evaluates the output of unconscious processing before behaviour is allowed to occur.

This model is supported by the well-known experiments of Benjamin Libet (1983), which showed that unconscious brain activity precedes conscious decisions, but that conscious awareness can veto those decisions. It is also consistent with the distinction made by Daniel Kahneman (2011) between fast, intuitive processing and slower, reflective thought, and with the work of Francis Crick and Christof Koch (2003), who emphasised the importance of feedback from higher brain areas to sensory regions in producing conscious awareness.

Optical illusions provide striking evidence of this process. What we consciously see is already shaped by unconscious interpretation before awareness occurs. The brain modifies sensory

input according to what it expects to see, and consciousness receives the interpreted result rather than the raw data.

The key point for our purposes is this:

- We are not conscious of the brain detecting patterns.
- We are conscious of selected outputs of that detection when they are presented for evaluation.

This is why we often experience a sense of connectedness before we can explain it. The unconscious mind has already recognised a pattern, but the conscious mind has not yet constructed an account of why that pattern exists.

The conscious system then attempts to make sense of what it is experiencing. If it cannot immediately do so, the matter is returned to unconscious processing for further integration. This can happen repeatedly, producing the familiar experience of reflection, rumination, or incubation, after which an explanation may suddenly “come to mind”.

Seen in this way, intuition is not mysterious. It is the conscious experience of the output of unconscious pattern recognition, prior to explanation.

This simple model helps explain why humans across cultures report feelings of connectedness, insight, or intuition that precede explanation. It also explains why the mind is strongly motivated to find explanations for such experiences: leaving them unresolved creates cognitive tension.

In the sections that follow, we will see how the form those explanations take depends on the conceptual tools available at the time.

### **3. The Universal Human Experience of Connectedness**

Most people can recall moments when they sensed that things were related before they could explain how. This experience is often described as intuition, insight, or simply a feeling that “this fits together”. The striking feature of such moments is that the experience comes first and the explanation follows later.

We may meet someone and feel that we understand them before knowing why. A scientist may have a strong hunch that two phenomena are linked long before evidence is gathered. An experienced doctor may sense that something is wrong before test results confirm it. Chess players, musicians, engineers, and craftspeople frequently report “seeing” the right move or solution without being able to articulate the reasoning behind it. In each case, a pattern has been recognised before it has been explained.

This experience is so common across cultures and history that it has often been interpreted as spiritual or mystical: a sense of connectedness that seems to transcend immediate reasoning. However, when viewed in light of the model outlined in the previous section, it can be understood as a normal feature of how the human mind operates. The unconscious mind detects patterns and relationships continuously. Conscious awareness receives the results of that detection as a felt sense of coherence, even when the explanation is not yet available.

Research in cognitive psychology and decision science strongly supports this interpretation. Daniel Kahneman (2011) describes fast, intuitive “System 1” thinking that operates automatically and largely outside awareness. Michael Polanyi (1966) famously observed that “we know more than we can tell”, emphasising that much knowledge is tacit rather than explicit.

Antonio Damasio (1994) has shown that feelings often precede reasoning in decision processes, and Gary Klein (1998) demonstrated that experts frequently make effective decisions through recognition before conscious analysis occurs.

These findings suggest that the experience of connectedness before explanation is not unusual or mysterious. It is a normal consequence of the way pattern recognition operates in the human mind. What varies across individuals and cultures is not the experience itself, but how it is interpreted and explained.

Early observers of nature, for example, noticed cycles, balance, and interdependence long before formal ecology or systems theory existed. Systems thinkers in the twentieth century often reported a sense of “wholeness” or “interrelatedness” before the formal languages of complexity, information, and network theory were available to describe these ideas precisely. In both cases, the sensed pattern preceded the explanatory framework.

Recognising this universal experience is important because it allows us to separate the perception of connectedness from the explanations built upon it. The perception is a shared human capacity. The explanations depend on the conceptual tools available at the time.

#### **4. Pattern Recognition Happens Below Conscious Awareness**

The reason we so often experience connectedness before explanation is that much of the brain’s pattern recognition occurs below the level of conscious awareness. The mind is continuously detecting regularities, relationships, and anomalies in the environment without our noticing the process. What reaches awareness is not the detection itself, but the *result* of that detection: a sense that something “fits”, or alternatively, that something is out of place.

We are therefore conscious of the outcome of pattern recognition rather than the process by which it occurs.

This understanding is well supported by research in cognitive science. Herbert Simon (1996) argued that expertise is largely a matter of recognising patterns rather than engaging in explicit reasoning. Work in artificial neural networks by researchers such as Geoffrey Hinton (2007) demonstrates how complex pattern recognition can occur without symbolic reasoning, offering a useful analogy for how the human brain may operate. Contemporary neuroscience, particularly in the field of predictive processing, suggests that the brain is constantly forming and updating internal models of the world outside conscious awareness.

What is important here is not simply that patterns are detected unconsciously, but how it feels when the results of that detection reach awareness without an accompanying explanation. We experience a sense that something “fits” or that events are related, yet we cannot immediately say why. This unresolved sense of connectedness is often uncomfortable. It creates a cognitive tension that we are motivated to resolve. We want to know what the pattern means and how the elements we perceive as related actually fit together.

Taken together, these insights reinforce a key point for this article: humans do not first reason about patterns and then perceive them. We perceive patterns through processes of which we are largely unaware, and only afterwards attempt to reason about what we have perceived.

This distinction between unconscious detection and conscious explanation is crucial for understanding how belief systems of many kinds can arise from the same underlying cognitive experience.

## 5. The Sense of Connectedness Creates Cognitive Tension

Sensing that things are connected without being able to explain how is not a neutral experience. It creates a subtle but persistent form of cognitive tension. Humans are strongly motivated to remove this tension by finding an explanation that restores coherence and meaning.

This is where the need for meaning enters the picture. The mind is not comfortable leaving perceived patterns unresolved. Once a sense of connectedness reaches awareness, it becomes something that demands interpretation. We want to know why things seem to fit together.

This can be seen in many everyday situations. Children repeatedly ask “why?” when they encounter patterns they do not yet understand. Scientists are often driven to investigate anomalies precisely because something does not fit existing explanations. Conspiracy theories can arise when people sense connections between events but lack reliable explanatory tools. Religious stories frequently form around natural cycles and interdependencies that are clearly observed but not yet formally understood.

In each case, the same underlying process is at work: the mind seeks to reduce the discomfort created by unexplained connectedness.

This phenomenon is well supported in psychology and neuroscience. Leon Festinger (1957) showed that humans experience psychological discomfort, which he termed *cognitive dissonance*, when confronted with unresolved inconsistency, and are motivated to reduce this tension by seeking coherence. The work of Karl Friston (2010) suggests that organisms act to minimise uncertainty and prediction error, constantly working to align their internal models with perceived reality. Research into meaning-making in psychology similarly indicates that humans have a deep need to construct coherent accounts of their experience.

These perspectives help explain why sensed patterns do not remain as vague intuitions. They trigger a drive to explain, interpret, and integrate. The form that those explanations take, however, depends on the conceptual tools available at the time.

This leads directly to the next question: how do culture, knowledge, and historical context shape the explanations we construct for the patterns we perceive?

## 6. Explanation Depends on Available Conceptual Tools

Although the experience of connectedness may be common across cultures and eras, the explanations constructed to account for it vary considerably. The form an explanation takes depends on the ideas, language, knowledge, and conceptual resources available at the time. The sensed pattern may be the same; the explanation differs.

When people observe balance in nature, cycles in the seasons, interdependence among living things, or invisible influences shaping events, they seek ways to describe and understand what they perceive. If the available explanatory tools are mythic, the result is myth. If they are metaphysical, the result is metaphysics. If they are scientific, the result is science. In each case, the mind is attempting to account for a genuine perception of connectedness using the best conceptual resources at hand.

This can be illustrated by comparing historical and modern explanations of similar observations:

<b>Observation</b>	<b>Historical explanation</b>	<b>Modern explanation</b>
Balance in nature	Harmony of creation	Ecological feedback loops
Interdependence	Web of life	Network theory
Cycles	Wheel of time	Dynamic systems
Invisible influence	Spirits or forces	Fields, constraints, information flows

These parallels are not coincidental. They arise because observers across history have been responding to the same kinds of perceived patterns in the world.

The philosopher of science Thomas Kuhn (1962) argued that what scientists can see and say is constrained by the paradigms within which they work. Concepts and language shape what can be recognised and how it can be described. Similarly, George Lakoff (1980) has shown how metaphor plays a crucial role in allowing humans to think and talk about complex ideas for which precise language does not yet exist.

Viewed in this light, historical explanations of natural and social phenomena need not be dismissed as naïve or irrational. Rather, they can be understood as attempts to explain genuine perceptions of connectedness using the conceptual tools available at the time. As scientific knowledge has expanded, those tools have become more precise, allowing explanations to shift from metaphor and narrative toward formal models and measurable processes.

The key point is that what has changed across history is not human ability to perceive patterns, but human ability to explain them.

## **7. The Influence of the Informational Environment on Explanation**

While explanations depend on the conceptual tools available at a given time, they are also shaped by the informational environment in which people live. Culture, political ideology, economic conditions, education, media, and advertising all influence the kinds of explanations that are readily available and socially reinforced.

When individuals experience a sense of connectedness that requires explanation, they rarely construct that explanation from first principles. Instead, they draw upon narratives, ideas, and language already present in their social surroundings. These socially supplied explanations can be adopted quickly because they satisfy the cognitive need to resolve the tension created by perceived patterns.

For example, during periods of economic hardship, people may perceive patterns of unfairness or instability in society. The explanations they adopt often align with prevailing political narratives, for example, blaming particular groups, institutions, or systems, rather than emerging from careful analysis. Similarly, advertising frequently links products to emotional states or life outcomes, encouraging people to form explanatory associations between consumption and wellbeing that are socially reinforced rather than individually reasoned.

Media environments can also shape explanation. Repeated exposure to particular storylines, for example, about crime, migration, or public health, can lead people to interpret isolated events as part of a larger pattern, even when statistical evidence does not support that

interpretation. The need to explain perceived connectedness is satisfied by the most readily available narrative.

This phenomenon is well supported in social psychology and sociology. Peter Berger and Thomas Luckmann (1966) argued that reality is socially constructed through shared meanings and narratives. Leon Festinger (1957) showed how people adjust beliefs to resolve internal tension. Research by Solomon Asch (1951) and Stanley Milgram (1963) demonstrated how strongly social context influences individual judgement. More recently, work by Daniel Kahneman and Amos Tversky (1974) on heuristics and biases has shown how readily available narratives shape interpretation.

Sociological research into media and communication, such as the work of George Gerbner (1998), has demonstrated how prolonged exposure to particular media environments can influence how people perceive patterns in the world. Studies in political psychology similarly show how ideological framing shapes interpretation of events.

In this sense, belief formation is not only a cognitive process but also a social one. The need to explain connectedness is individual, but the resources used to satisfy that need are often collective and culturally supplied.

Recognising this influence is important for education and dialogue. It reminds us that improving explanations is not simply a matter of providing better information, but also of understanding the broader informational landscape in which people make sense of their experiences.

## **8. Why Religious and Metaphysical Accounts Resemble Systems Science**

Once we recognise that humans detect patterns before they can explain them, and that explanations depend on the conceptual tools available, an interesting observation begins to make sense. Religious and metaphysical descriptions of the world often bear a striking resemblance to ideas found in modern systems science.

This resemblance is not coincidental. It arises because both are attempts to explain the same sensed patterns of interdependence, hierarchy, feedback, and cyclical change observed in the natural and social world. What differs is not what is being perceived, but the explanatory language used to describe it.

Phrases such as:

- “All things are connected”
- “Higher and lower orders”
- “Balance must be maintained”
- “Cycles of life”

map readily onto systems concepts such as network interdependence, levels of emergence, feedback regulation, and dynamic systems behaviour. The similarity lies not in shared doctrine, but in shared observation.

Observers in earlier eras noticed genuine features of the world: ecological balance, social interdependence, natural cycles, and the way in which parts relate to wholes. Lacking formal theories of complexity, information, feedback, and emergence, they described these features

using the conceptual language available to them: often metaphorical, narrative, or spiritual in form.

This parallel has been noted by systems thinkers such as Fritjof Capra (1996), who drew attention to similarities between systems science and certain strands of Eastern philosophy. Comparative work in philosophy and ecology has similarly observed that many traditional descriptions of nature reflect careful observation of patterns that modern science now describes more precisely.

Seen in this light, religious and metaphysical accounts need not be viewed simply as mistaken explanations. Rather, they can be understood as historically situated attempts to describe real patterns in the world before the formal scientific language required to do so existed.

What systems science provides is not a completely new way of seeing, but a more precise way of explaining what humans have long sensed.

### **9. Early Systems Science and the Use of Metaphor**

The development of systems science in the mid-twentieth century provides a particularly clear illustration of how explanation depends on available conceptual tools. Early systems thinkers recognised patterns of emergence, interdependence, regulation, and organisation that could not be adequately described using the reductionist language dominant at the time. They sensed that wholes behaved differently from the sum of their parts, that systems could regulate themselves, and that relationships between components were often more important than the components themselves.

However, the formal sciences needed to explain these observations precisely, that is, complexity theory, information theory, network science, and modern cognitive science, had not yet fully developed. As a result, early systems science relied heavily on metaphor as a bridge between perception and explanation.

Phrases such as:

- “The whole is more than the sum of its parts”
- “Self-organising systems”
- “Holism”

were not attempts to be vague. They were attempts to describe real, observed patterns for which precise language did not yet exist.

This can be seen in the work of pioneers such as Ludwig von Bertalanffy (1968), Norbert Wiener (1948), and Ross Ashby (1956). Each recognised important systemic features of the world but expressed them in terms that were necessarily metaphorical or analogical because the formal explanatory frameworks were still emerging.

In this sense, early systems science occupies an intermediate position between metaphysical explanation and modern scientific formalisation. It represents a stage at which genuine perceptions of connectedness and organisation were being translated into increasingly precise conceptual forms, but where metaphor remained an essential tool.

Understanding this historical context helps explain why systems language can sometimes feel “spiritual” or imprecise, and why modern developments in complexity, information, and cognitive science now allow many of these early insights to be expressed with far greater clarity.

## 10. A General Model of How Belief Systems Form

The discussion so far can be brought together into a simple, general model of how belief systems arise.

Humans detect patterns in the world largely outside conscious awareness. The results of this detection are experienced consciously as a sense of connectedness. This sense of connectedness creates a need for explanation, and the explanation that is constructed depends on the conceptual tools, language, and knowledge available at the time.

This process can be summarised as:

**Pattern detected → Felt connectedness → Need for explanation → Explanation using available idiom**

This sequence applies not only to religious and metaphysical belief systems, but also to systems thinking and modern scientific explanation. In each case, the same underlying cognitive process is at work. What differs is the idiom in which the explanation is expressed.

Understanding this model helps to explain why people using very different forms of language, spiritual, metaphysical, metaphorical, or scientific, may nevertheless feel that they are describing the same underlying reality. They are responding to the same experience of connectedness, but explaining it with different conceptual resources.

This perspective also sheds light on why people can be deeply attached to particular belief systems. These systems are not arbitrary constructions but attempts to resolve a genuine cognitive tension produced by perceived patterns in the world. Challenging the explanation without acknowledging the underlying experience can therefore feel like denying something deeply felt and personally real.

This model connects closely with work on human needs, communication across idioms, and motivational reflexivity. It highlights how differences in explanatory language can obscure shared perceptions, and how careful translation between idioms can improve understanding without requiring agreement on every detail of explanation.

## 11. Implications for Communication Today

Recognising that humans sense patterns before they can explain them has important implications for communication in the present day. People using spiritual, metaphysical, metaphorical, or scientific language may, in many cases, be responding to the same underlying experience of connectedness. What differs is the explanatory idiom, not necessarily the perception itself.

Understanding this helps to explain why conversations between people with very different worldviews can be so difficult. A person expressing ideas in spiritual or metaphysical terms may feel that they are describing something deeply real and directly experienced. A person trained in scientific reasoning may reject the explanation as imprecise or incorrect. Both may feel that the other is missing something important.

Seen through the lens developed in this article, such disagreements can often be understood as disagreements about explanation rather than disagreements about what is being perceived. This opens the possibility of translation without confrontation: acknowledging the validity of the experience while carefully refining the explanation.

This is particularly relevant in systems thinking, where descriptions of interdependence, wholeness, and emergence can sometimes “feel spiritual” even when they are intended in a scientific sense. It also helps to explain why people may defend legacy beliefs strongly: these beliefs are tied to genuine experiences of perceived connectedness that have been given culturally familiar explanations.

For education, this perspective offers a valuable teaching tool. Students can be helped to recognise in themselves the experience of sensing patterns before explanation, and to understand how different explanatory systems can arise from that common cognitive foundation. This can foster both scientific clarity and respect for the historical and cultural origins of alternative ways of describing the world.

Ultimately, this approach encourages dialogue that focuses not on dismissing beliefs outright, but on improving the precision of explanation while acknowledging the shared human experience from which those beliefs arise.

## **12. Practical Ways to Communicate Across Different Explanatory Idioms**

If people using spiritual, metaphysical, metaphorical, or scientific language may be responding to the same underlying experience of connectedness, then disagreement often lies not in what is perceived, but in how it is explained. This opens the possibility of improving dialogue without requiring anyone to abandon their preferred idiom.

A first step is to distinguish carefully between experience and explanation. Instead of challenging a person’s explanation directly, it can be helpful to acknowledge the experience they are describing. Phrases such as “I can see what you mean by things being connected” recognise the perception without endorsing the explanation.

A second step is to translate rather than confront. For example, a statement such as “everything is connected” can be gently reframed in systems language as “many things influence one another through networks of relationships.” This preserves the sensed meaning while refining the explanatory form.

A third step is to recognise the role of metaphor. Many expressions that appear imprecise are attempts to describe real patterns without formal tools. Identifying the metaphor and offering a more precise equivalent can be done collaboratively rather than competitively.

A fourth step is to avoid forcing binary choices between idioms. People rarely abandon explanatory frameworks that have helped them make sense of their experiences. However, they may be willing to see how those frameworks can be expressed in more precise or testable terms.

Finally, education can play an important role by helping students recognise in themselves the process described in this article: sensing patterns before explanation. Once this is understood, it becomes easier to see how multiple explanatory systems can arise from the same cognitive foundation, and why careful translation between them is often more productive than argument.

In this way, communication across differing worldviews can move from confrontation toward mutual clarification, without requiring agreement on every detail of explanation.

### **13. A Note on the Limits of Explanatory Idioms**

Understanding how belief systems arise from genuine perceptions of connectedness does not mean that all explanations are equally helpful for advancing knowledge. Some explanatory frameworks, particularly those rooted in historical, religious, or loosely defined “spiritual” perspectives, can become obstacles when they are treated as complete accounts of how the world works rather than as early attempts to describe perceived patterns.

Difficulties arise not from the experience of connectedness itself, but when particular explanations are defended in ways that resist refinement, testing, or replacement by more precise accounts. In such cases, historical idioms that once served an important role in helping people make sense of the world can hinder the development of more accurate scientific understanding.

It is entirely possible for individuals to hold religious or spiritual perspectives at a personal or cultural level while recognising that scientific explanation operates under different constraints and methods. Problems tend to occur when explanatory idioms are confused with one another, or when metaphorical and narrative descriptions are treated as substitutes for formal investigation.

Recognising the distinction between perception and explanation therefore serves not only to improve dialogue, but also to clarify the conditions under which knowledge can progress.

### **14. Conclusion**

This paper has argued that a common and often overlooked feature of human cognition underlies the formation of many different belief systems.

Humans have always been adept at recognising patterns in the world around them. What has changed across history is not this ability to perceive connectedness, but the ability to explain it with increasing precision. Religious, metaphysical, early systems, and modern scientific accounts can all be understood as attempts to make sense of the same underlying cognitive experience using the conceptual tools available at the time.

Recognising this helps to dissolve an unnecessary opposition between different ways of describing the world. It allows us to see that disagreements often arise not from what is perceived, but from how it is explained. At the same time, it reminds us that explanations differ in their capacity to be refined, tested, and improved, and that the progress of knowledge depends on this capacity.

By distinguishing between experience and explanation, it becomes possible to translate between idioms rather than confront them, while still recognising the special role of scientific explanation in advancing understanding.

This perspective is particularly valuable in education and dialogue. Helping people to recognise in themselves the experience of sensing patterns before explanation provides a common starting point from which more precise and shared understandings can grow.

In this way, the development of knowledge can be seen not as a rejection of past ways of thinking, but as a gradual refinement of how humans explain what they have long sensed.

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## Appendix: Definitions and Propositions

### Definitions

#### **D1. Pre-conscious Pattern Recognition**

The cognitive process by which regularities, relationships, and anomalies are detected below the level of conscious awareness.

#### **D2. Sense of Connectedness**

The conscious experience that arises when the results of pre-conscious pattern recognition are fed into conscious systems before an explanation is available.

#### **D3. Conscious Feedback Loop**

The recursive interaction between conscious, behavioural, and sensory processing through which the results of unconscious processing are simulated, evaluated, and either enacted or returned for further processing.

#### **D4. Meaning-Resolution Drive**

The human tendency to reduce the cognitive tension created by unexplained connectedness by constructing an explanation.

#### **D5. Explanatory Idiom**

The set of conceptual tools, language, metaphors, and knowledge available within a culture or historical period that are used to construct explanations.

#### **D6. Informational Environment**

The cultural, social, political, economic, and media context that shapes which explanatory idioms are readily available and socially reinforced.

#### **D7. Belief System (Cognitive)**

A structured set of explanations constructed to resolve the sense of connectedness produced by pre-conscious pattern recognition.

#### **D8. Metaphorical Bridging**

The use of analogy and metaphor to describe perceived patterns when formal explanatory tools are not yet available.

#### **D9. Idiom Translation**

The process of expressing the same perceived pattern using different explanatory idioms without dismissing the underlying experience.

### Propositions

**P1.** Humans detect patterns in their environment before they are consciously aware of doing so.

**P2.** Conscious awareness receives selected outputs of unconscious pattern detection as a felt sense of connectedness before any explanation has been formed.

- P3.** A sensed connectedness that lacks explanation produces cognitive tension.
- P4.** Humans are motivated to resolve this tension by constructing explanations.
- P5.** The explanations people construct are constrained by the conceptual tools, language, and knowledge available at the time.
- P6.** The explanations people adopt are further shaped by the cultural, social, political, and informational environment in which they live.
- P7.** Religious, metaphysical, systems, and scientific belief systems can arise from the same underlying cognitive process.
- P8.** Similarities between historical and modern explanatory systems arise from shared perception of genuine patterns rather than shared doctrine.
- P9.** When formal explanatory tools are lacking, metaphor serves as a necessary bridge between perception and explanation.
- P10.** Early systems science relied on metaphor because the formal sciences required for precision were not yet developed.
- P11.** Disagreements between belief systems often concern explanation rather than perception.
- P12.** Recognising the distinction between perception and explanation enables translation across explanatory idioms without confrontation.
- P13.** Some explanatory idioms can hinder the development of more precise scientific explanations when treated as complete accounts rather than provisional ones.
- P14.** Education that helps individuals recognise their own experience of sensing patterns before explanation can improve dialogue across differing explanatory frameworks.