

## CHAPTER XII: THE HOLISTIC UNIVERSE

### *Comprehensive Chapter Analysis*

#### SECTION 1: CHAPTER POSITION IN THE OVERALL ARGUMENT

##### Chapter's Role in the Book's Overall Argument

Chapter XII, "The Holistic Universe," serves as the culminating synthesis of Smuts's entire philosophical project. Having traced Holism through its progressive manifestations—from atoms through organisms, mind, and Personality—Smuts now turns to articulate what these findings mean for our *Weltanschauung* (world-view). The chapter functions not merely as a conclusion but as a philosophical elevation, lifting the empirically-grounded arguments of previous chapters into a comprehensive metaphysical vision.

Smuts explicitly acknowledges this synthetic purpose: "This is not a treatise on Philosophy; not even on the philosophy of Nature; not even on the philosophy of Evolution. It is an exploration of one idea, an attempt to sketch in large and mostly vague, tentative outline the meaning and the consequences of one particular idea. But that is a seminal idea; indeed it is here presented as more than an idea, as a fundamental feature and principle in the universe."

##### High-Level Summary of the Chapter's Central Claim

The chapter's central proposition is that Holism, demonstrated throughout the preceding chapters as the fundamental ordering principle across all domains of nature, necessitates a new conception of the universe itself—one that transcends both reductive Naturalism and spiritualizing Idealism. Smuts argues that this is a "whole-making universe," characterized by creative Evolution producing ever more integrated and self-regulating wholes from atoms to Personalities.

The chapter defends Holism against the charge of being "extra-scientific" while simultaneously critiquing major philosophical alternatives: Naturalism, Idealism, Leibnizian Monadism, and Spiritual Pluralism (Panpsychism). Smuts positions Holism as uniquely adequate to the facts of creative Evolution—neither reducing everything to matter nor projecting Spirit backward onto material origins.

##### Relationship to Preceding and Subsequent Chapters

Chapter XII explicitly draws upon and integrates all previous chapters:

- **Chapters I–III (Reformed Concepts):** The chapter recapitulates how Space-Time, Action, and structural matter provide the foundational substrate for holistic development.
- **Chapter IV (Cell and Organism):** The organic syntheses that demonstrate holistic principles at the biological level are summarized as stages in the progressive series.
- **Chapters V–VI (Holism and Its Categories):** The theoretical apparatus—creativity, freedom, wholeness—is deployed to critique alternative world-views.
- **Chapter VII (Mechanism and Holism):** The reconciliation of mechanism with holism at lower levels grounds the critique of pure Naturalism.
- **Chapter VIII (Darwinism and Holism):** The evolutionary framework becomes central to critiquing both Naturalism and Idealism.
- **Chapters IX–XI (Mind and Personality):** The emergence of mind and Personality as genuine creative novelties—not present at the beginning—becomes the key evidence against Panpsychism and spiritual monism.

As the final chapter, Chapter XII has no subsequent chapter. However, Smuts explicitly notes that the book is "introductory" and that the "aspects and bearings of Holism in which I am mainly interested are not yet reached in this study." The chapter thus points toward future developments, particularly regarding Values and ethical ideals, which Smuts defers for later treatment.

## SECTION 2: KEY CONCEPTS INTRODUCED OR DEVELOPED

### Concepts Introduced or Substantially Developed

#### 1. *Weltanschauung (World-View)*

**Definition:** The comprehensive philosophical conception of the universe that integrates scientific knowledge with metaphysical understanding. Smuts uses this German term deliberately to signal philosophical ambition beyond mere empirical description.

**Significance:** Smuts argues that the "seminal character" of Holism necessarily affects our *Weltanschauung*. Science's expansion to encompass cosmic Evolution demands a corresponding expansion of philosophical framework.

#### 2. *Action (Im Anfang war die That)*

**Definition:** Activity in time; energy multiplied by time; the physical basis of the universe. Smuts explicitly distinguishes Action from mere energy, which he considers "too narrow and metrical a term."

**Significance:** "The physical stuff of the universe is therefore really and truly Action in its various patterns or configurations, and nothing else." By invoking Goethe's formulation from *Faust*—"In the beginning was the Deed"—Smuts signals a dynamic rather than static conception of ultimate reality.

#### 3. *Structural Action*

**Definition:** Action that is not "confined to its structures, but continually overflows into their 'fields' and becomes the basis for the active dynamic Evolution which creatively shapes the universe."

**Significance:** This concept bridges physical science (Relativity's Space-Time) with holistic metaphysics, showing how the universe's fundamental activity manifests in structured forms that generate fields of influence.

#### 4. *The Holistic Field of Nature*

**Definition:** "The organic field of Nature, which results from the creative interpenetration of all fields of wholes composing her, has its own structural curves of progress." This is not a transcendent Mind or Purpose, but an immanent organizational principle emerging from the totality of holistic interactions.

**Significance:** This concept allows Smuts to explain evolutionary direction without invoking teleology or divine purpose. The "friendly intimate influences" of Nature's field guide development without external intervention.

#### 5. *Creative Increments/Instalments*

**Definition:** The characteristic mode of creative Evolution, which proceeds "by way of small increments or instalments of 'creation'" rather than continuous smooth advance or single supreme creative Acts.

**Significance:** Smuts sees this discontinuous character as "a universal phenomenon," paralleling the quantum character of matter and energy. This connects holistic metaphysics with the New Physics.

#### 6. *Soul-Making vs. Whole-Making*

**Definition:** Smuts's distinctive formula: "This is a universe of whole-making, not merely of soul-making, which is only its climax phase." Soul-making (spiritual development) is real but represents only the highest evolutionary phase, not the fundamental cosmic process.

**Significance:** This formulation allows Smuts to affirm the reality of spiritual values while rejecting the projection of spirituality onto lower levels of existence (against Panpsychism).

### Terminological Notes

**"Extra-scientific":** Smuts uses this term pejoratively to describe the charge that Holism goes beyond proper scientific explanation. He systematically refutes this characterization.

**"Ether":** Smuts references the now-abandoned concept of luminiferous ether as a precedent for science accepting theoretical entities beyond direct observation. Though acknowledging ether "seems to have fallen on evil days," he uses it to legitimize Holism as a similarly necessary conceptual entity.

**"Monad":** Leibniz's term for spiritual units composing reality. Smuts carefully distinguishes wholes from monads: wholes are not all spiritual, not closed systems, are genetically related, and are coordinated by Evolution rather than Pre-established Harmony.

**"Panpsychism":** The view that all things possess psychical or spiritual attributes. Smuts explicitly rejects this, arguing it conflates different evolutionary levels.

## SECTION 3: DIALECTICAL CONTEXT

### Views Being Critiqued or Rejected

#### *1. Naturalism*

Smuts defines Naturalism as the view that "presents the universe as a vast reservoir of energy, unalterable in amount but steadily deteriorating in character, subject to immutable laws and fixed equations which prevent anything essentially new from ever arising." It "imposes the past on the present and the future."

**Critique:** "Naturalism is wrong where it fails to recognise that there is creative Evolution, and that real new entities have arisen in the universe, in addition to the physical beginnings." Smuts argues that consistent acceptance of Evolution undermines the mechanistic assumptions of Naturalism.

#### *2. Idealism*

Idealism "imposes the present and the future on the past," viewing Spirit or Psyche as "the primordial dominant factor."

**Critique:** "Idealism is wrong where it fails to recognise that the Spirit or Psyche, although now a real factor, did not exist either explicitly or implicitly at the beginning, and has arisen creatively in the course of organic Evolution." Smuts asks pointedly: "Where was the Spirit when the warm Silurian seas covered the face of the earth?"

#### *3. Leibnizian Monadism*

Leibniz conceived the universe as composed entirely of spiritual monads—"absolutely closed, isolated, self-contained units"—maintained in harmony by divine Pre-established Harmony.

**Critique:** Smuts offers four objections: (1) wholes are not all spiritual; (2) wholes are not closed but have interpenetrating fields; (3) wholes are genetically related through Evolution; (4) coordination arises from Evolution itself, not Pre-established Harmony. Leibniz "missed the true explanation through not having any knowledge of creative Evolution."

#### *4. Spiritual Pluralism/Panpsychism*

Modern versions of Monadism (James Ward is specifically mentioned) that attribute psychical properties to all entities including atoms.

**Critique:** "The very idea of creative Evolution or epigenesis is that both life and mind are later arrivals in the evolutionary series, and cannot possibly be antedated to the mere physical level of Evolution. There is not a great Society of Spirits in the universe... When the term 'Spiritual' is stretched that far and spread that thin, it loses all real value."

## Thinkers Engaged

- **Gottfried Wilhelm Leibniz** (1646–1716): Extended engagement with Monadology; Smuts both appreciates its recognition of "innerness" and systematically critiques its pre-evolutionary framework.
- **James Ward** (1843–1925): Cambridge philosopher whose Pluralistic Panpsychism is critiqued despite Ward's own commitment to creative Evolution.
- **Baruch Spinoza** (1632–1677): Mentioned as assuming all things are "in their several degrees animata" (possessed of souls), sharing Leibniz's error from ignorance of Evolution.
- **Immanuel Kant** (1724–1804): Invoked approvingly for the argument that "from the facts of Nature no inference of God is justified."
- **Albert Einstein** (1879–1955): Referenced for Space-Time and Relativity as scientific foundations for Smuts's metaphysics.
- **John Keats** (1795–1821): Quoted for "the valley of soul-making," which Smuts reinterprets through his whole-making/soul-making distinction.
- **Johann Wolfgang von Goethe** (1749–1832): "Im Anfang war die That" provides Smuts's motto for the primacy of Action.

## The Problem the Chapter Addresses

The chapter addresses the fundamental problem: *What world-view is adequate to the facts of creative Evolution?* Given that the universe demonstrably produces genuine novelty—life from matter, mind from life, Personality from both—what metaphysical framework can accommodate these facts without either reducing novelty to mere rearrangement (Naturalism) or illegitimately projecting later developments backward (Idealism)?

## SECTION 4: MAIN ARGUMENTS AND THEIR STRUCTURE

### Argument 1: Holism as Legitimate Scientific Concept

#### Premises:

1. Science now recognizes that "the whole universe, inorganic as well as organic, is the expression of cosmic Evolution."
2. Such comprehensive scope "necessitates a ground-plan which will formulate and explain this vast scientific scheme of things."
3. Science has precedent for accepting entities beyond direct observation (e.g., the ether) when necessary for explanatory coherence.
4. Holism is "essentially no more ultra-scientific than are life and mind; it is simply a wider concept than either and is the genus of which they are the species."

**Conclusion:** "The case for Holism is much stronger than that for ether ever was, as ether was meant to account only for one particular group of phenomena in physics, while Holism in the main phases of its development is necessary to account for the facts and phenomena of Evolution, both organic and inorganic."

**Logical Structure:** Argument from explanatory necessity combined with precedent. If science accepts theoretical entities for partial explanation, it should accept one that provides comprehensive explanation.

### Argument 2: Creative Evolution Refutes Naturalism

#### Premises:

1. Naturalism holds that the universe is governed by "immutable laws and fixed equations which prevent anything essentially new from ever arising."
2. Evolution demonstrably produces genuine novelty: life from non-life, mind from non-mind, Personality from both.
3. These are "real new entities," not mere rearrangements of pre-existing elements.

**Conclusion:** "To me the rock on which Naturalism must split is the fact of creative Evolution."

**Logical Structure:** Modus tollens. If Naturalism is true, genuine novelty is impossible. Genuine novelty exists. Therefore Naturalism is false.

### Argument 3: Creative Evolution Refutes Idealism

#### Premises:

1. Idealism views Spirit as "the primordial dominant factor" present from the beginning.
2. Evolutionary facts demonstrate that "the earth [existed] millions of years before ever the psychical or spiritual order had arisen."
3. "The ideal or spiritual is a new and indeed recent creation in the order of the universe... it was not implicit in the beginnings and has not been reached by a process of unfolding."

**Conclusion:** "To view the ideal or spiritual element in the universe as the primordial dominant factor is to ignore the fact that the universe was before ever the ideal or spiritual had appeared on the horizon."

**Logical Structure:** Historical-empirical argument. Idealism's claims about Spirit's primordial presence contradict evolutionary chronology.

### Argument 4: Holism vs. Monadism

#### Premises:

1. Leibniz's monads are "absolutely closed, isolated, self-contained units" that are essentially spiritual and maintained by Pre-established Harmony.
2. Smuts's wholes are not all spiritual; they have interpenetrating fields; they are genetically related through Evolution; they are coordinated by evolutionary process itself.
3. Leibniz "could not realise the idea that monads were genetically related and evolved" because he "adhered to the traditional preformation views of his day as well as to the current belief in the fixity of species."

**Conclusion:** "The Holistic universe is a profoundly reticulated system of interactions and inter-connections rising into a real society in its later phases," fundamentally unlike Leibniz's isolated, pre-harmonized monads.

**Logical Structure:** Argument from difference. Despite superficial similarity (recognition of unity/wholeness), wholes and monads differ in essential properties.

### Argument 5: Nature Not Itself a Whole/Mind

#### Premises:

- Creative Evolution produces wholes that are "transcendent to [their] parts... its character cannot be inferred from the characters of its parts."
- If Nature were a Whole/Mind/Personality composed of all lesser wholes, it would be "creatively new and unlike the wholes which we know."
- "From the facts of Nature no inference of God is justified" (Kant's argument accepted).

**Conclusion:** "From the facts neither an organism nor a Mind of Nature can strictly be inferred; still less a Personality constituted by both... The World-Soul is a poetic metaphor and probably no more."

**Logical Structure:** Argument from the logic of holistic emergence. A whole transcends its parts; therefore we cannot infer a cosmic Whole's character from its parts' characters.

## SECTION 5: EVIDENCE AND EXAMPLES USED

### Empirical Evidence Cited

- **Geological record:** "The warm Silurian seas," "Pre-Cambrian system," early mountains "which have now entirely disappeared." Used to demonstrate the temporal priority of matter over Spirit.
- **Atomic physics:** Discontinuous (quantum) character of matter and energy parallels the discontinuous character of creative Evolution.

- **Relativity physics:** Space-Time as structural, Action as fundamental, fields as extending beyond apparent boundaries.
- **Evolutionary chronology:** The sequence atoms → molecules → cells → organisms → minds → Personalities as historical fact.

### Illustrative Examples

- **The ether analogy:** "The assumption of the ether of space was resorted to as the basis of the undulatory theory for the transmission of radiant energy. Although ether admittedly lies beyond the area of scientific observation and experiment... it was long accepted as one of the conceptual entities which were necessary to complete the coherent system of Science."
- **Social field analogy:** "In human society we see how the social field or atmosphere becomes a system of control, a moulding influence to which all incoming members are subject." This illustrates how Nature's holistic field controls evolutionary direction without conscious purpose.
- **Diffuse nebula example:** "Where was the Spirit when the Solar System itself was still a diffuse cold nebula?" Rhetorical example demonstrating absurdity of retroactive spiritualization.

### Scientific Sources Invoked

The chapter primarily synthesizes scientific material introduced in earlier chapters (Relativity, atomic physics, evolutionary biology) rather than citing new sources. The "New Physics" and geological/paleontological record are invoked as established scientific knowledge rather than as specific source references.

## SECTION 6: KEY QUOTATIONS FOR REFERENCE

### **Quotation 1: The Central Thesis**

*"The final net result is that this is a whole-making universe, that it is the fundamental character of this universe to be composed of wholes, of ever more complete and advanced wholes, and that the Evolution of the universe, inorganic and organic, is nothing but the record of this whole-making feature of the universe." (p. 322–323)*

### **Quotation 2: Action as Fundamental**

*"The universe is a flowing stream in Space-Time, and its reality is not intelligible apart from this concept of activity. So much the new Relativity has made us realise; and to this conclusion the profoundest reflections on the nature of the universe also tend. For us, constituted as we are, the universe starts and takes its origin in Action. With deeper meaning than ever before we realise that 'Im Anfang war die That.'" (p. 323)*

### **Quotation 3: Critique of Panpsychism**

*"There is not a great Society of Spirits in the universe, of which Persons and Things, Souls and Atoms, alike are members on the same spiritual footing. When the term 'Spiritual' is stretched that far and spread that thin, it loses all real value and becomes a mere empty figure of speech... Holism, not Spiritualism, is the key to the interpretation of the universe." (p. 332)*

### **Quotation 4: Whole-Making vs. Soul-Making**

*"This is a universe of whole-making, not merely of soul-making, which is only its climax phase. The universe is not a pure transparency of Reason or Spirit. It contains unreason and contradiction, it contains error and evil, sin and suffering. There are grades and gaps, there are clashes and disharmonies between the grades. It is not the embodiment of some simple homogeneous human Ideal. It is profoundly complex and replete with unsearchable diversity and variety." (p. 334)*

### **Quotation 5: The Concluding Vision**

*"Wholeness, healing, holiness—all expressions and ideas springing from the same root in language as in experience—lie on the rugged upward path of the universe, and are secure of attainment—in part here and now, and eventually more fully and truly. The rise and self-perfection of wholes in the Whole is the slow but unerring process and goal of this Holistic universe." (p. 342)*

## SECTION 7: TIER 1 CONCEPT DEVELOPMENT

### Holism

Chapter XII brings the concept of Holism to its fullest philosophical articulation. Holism is now established as: (1) "the fundamental synthetic, ordering, organising, regulative feature in the universe"; (2) a legitimate scientific concept no less than life or mind; (3) the comprehensive principle that bridges matter, life, mind, and Personality; (4) an alternative to both Naturalism and Idealism.

**Contemporary Connection:** Denis Noble's principle that biological causation operates at multiple organizational levels—not reducible to genes—directly parallels Smuts's insistence that Holism is not merely descriptive but explanatorily necessary. Noble's argument in *The Music of Life* that "there is no privileged level of causation" echoes Smuts's claim that Holism "bridges the gaps between matter, life, and mind."

### The Whole

The chapter addresses whether the Universe itself constitutes "The Whole" in Smuts's technical sense. His answer is carefully negative: "From the facts neither an organism nor a Mind of Nature can strictly be inferred." However, the totality of wholes generates a "holistic field" that functions as the "organic field of Nature." The universe is a "whole-making" system without itself being a single Whole.

**Contemporary Connection:** Network medicine (Barabási) similarly resists positing a single controlling entity while emphasizing that disease and health emerge from the interacting totality of physiological networks. The "diseasome" is neither reductive (single causes) nor holistically unified (one controlling whole), but emerges from network topology—much like Smuts's "field" emerges from interacting wholes.

### Fields

The field concept reaches its most expansive articulation. "The organic field of Nature, which results from the creative interpenetration of all fields of wholes composing her, has its own structural curves of progress." This "field" replaces both mechanistic causation and teleological purpose as the explanation for evolutionary direction. The field is real but immanent—not a transcendent Mind.

**Contemporary Connection:** Michael Levin's research on bioelectric fields in morphogenesis demonstrates precisely the kind of organizational influence Smuts envisioned. Levin's bioelectric gradients create "pattern memories" that guide regeneration without genetic instruction—field effects shaping development holistically.

### Creative Evolution/Synthesis

Creative Evolution serves as the decisive criterion against all alternative philosophies. Both Naturalism and Idealism "implicitly deny that creative Evolution which shows the universe historically as a gradual transformation, as a real creative process." Evolution proceeds by "small increments or instalments of 'creation,'" paralleling the quantum character of physical reality. The chapter emphasizes that evolution is genuinely creative—producing "real new entities" rather than mere rearrangements.

**Contemporary Connection:** The Extended Evolutionary Synthesis's emphasis on developmental plasticity, niche construction, and organism-driven evolution resonates with Smuts's creative Evolution. Eva Jablonka and Marion Lamb's work on epigenetic inheritance demonstrates mechanisms for the "instalments of creation" Smuts invoked.

### Mind

Mind appears in Chapter XII primarily as the counter-example to Panpsychism. Smuts insists that mind is a "later arrival[] in the evolutionary series" and "cannot possibly be antedated to the mere physical level of

Evolution." This preserves both mind's reality and its genuine emergence—it exists now as a "real factor" without having been implicit in physical origins.

**Contemporary Connection:** Integrated Information Theory (IIT) and Global Workspace Theory both treat consciousness as genuinely emergent from but not reducible to neural substrates—neither eliminativist (denying mind) nor Panpsychist (finding mind everywhere). This mirrors Smuts's careful positioning.

### Values and Ideals

Though Smuts explicitly defers full treatment of Values for future work, Chapter XII establishes crucial foundations. "Wholeness, healing, holiness—all expressions and ideas springing from the same root in language as in experience" represent Values grounded in holistic cosmic process rather than transcendent source. The "ideals of Well-being, of Truth, Beauty and Goodness are firmly grounded in the nature of things."

**Contemporary Connection:** The etymology that Smuts invokes (whole/heal/holy) has gained renewed attention in discussions of integrative medicine and ecological ethics. The grounding of values in natural process rather than external imposition resonates with contemporary naturalistic ethics.

## CONCLUDING ASSESSMENT

Chapter XII serves as both culmination and invitation. It brings Smuts's holistic argument to philosophical fullness while explicitly acknowledging that this "introductory" work leaves the highest developments—Values, Ideals, the spiritual implications of Holism—for future treatment. The chapter's systematic critique of Naturalism, Idealism, and Panpsychism positions Holism as uniquely adequate to the facts of creative Evolution.

Most significantly for the project of *Holism Rising*, Chapter XII demonstrates that Smuts's vision was never merely biological or psychological but genuinely cosmological. The "whole-making universe" encompasses all domains from physics to ethics. Contemporary science's discovery of holistic principles across these same domains—from quantum entanglement through systems biology to network medicine—validates this comprehensive vision in ways Smuts could only anticipate.

The chapter's insistence that the "holistic nisus which rises like a living fountain from the very depths of the universe is the guarantee that failure does not await us" offers not merely descriptive science but what Smuts himself called "a programme of action"—a vision of cosmic belonging that makes ethical striving integral to universal process.

*Document prepared for the Holism Rising project  
December 2025*