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From Bodily Need to Care: Natural Resource use in Ibn Tufayl's Hayy ibn Yaqzan

Hayam A. K. Almaamari

Mohamed Bin Zayed University for Humanities, United Arab Emirates;
Mohamed Bin Zayed University for Humanities, Abu Dhabi, United Arab Emirates.
Corresponding author: Hayam A. K. ALMAAMARI

Email: halmaamari10@gmail.com, ORCID: [0000-0002-0750-4063]

ABSTRACT: Ibn Tufayl's Hayy ibn Yaqzan places the natural world at the centre of bodily survival, learning, self-discipline, and philosophical ascent. This study examines how bodily need is regulated through the selection, consumption, and care of natural resources. A purposive textual corpus was constructed from six episodes in the Arabic text connecting bodily or vital need with food, plants, animals, water, or resource use. The passages were analysed qualitatively through a functional discourse-semiotic procedure tracking five elements: sign, need, interpretation, decision, and consequence/care. The analysis identifies three linked movements. First, nourishment is framed as necessary for preserving the living body. Second, Hayy regulates consumption through the kind, quantity, and timing of food while considering seed viability, resource abundance, regenerative capacity, and avoidance of depletion. Third, the capacity used to recognize hunger and bodily weakness expands into recognition of thirst, injury, and deprivation in plants and animals, prompting watering, feeding, and removal of harm. The narrative thus moves from bodily need to regulated consumption and then to care for living beings. These practices should not be treated as a modern theory of sustainability or as clinical dietary guidance. Rather, they provide a historical-conceptual model linking dietary sufficiency, resource regeneration, and care within a premodern account of human well-being.

1. INTRODUCTION

Ibn Tufayl's Hayy ibn Yaqzan is a philosophical narrative in which knowledge develops through a sustained movement from sensory experience and practical adaptation to rational inquiry and, finally, contemplative and spiritual knowledge. Hayy grows outside human society and initially encounters nature not as an abstract object of speculation but as the immediate condition of survival. Food, water, shelter, animals, plants, and fire are therefore embedded in the narrative's epistemic development rather than functioning as decorative features of an island setting. The work has consequently attracted readings centred on autodidactic knowledge, natural reason, philosophical education, and the relation between experience and intellectual perfection (Kukkonen, 2008, 2014, 2016; Baroud, 2019; Field, 2023). These approaches are important for the present study because they caution against isolating bodily practices from the narrative's larger movement of self-formation.

The medical dimension of this embodied philosophy also has a historical basis outside the tale. Ibn Tufayl was not only a philosopher and court intellectual but also a royal physician and medical author. Kukkonen's historical study places his medical activity within his Almohad intellectual and courtly career (Kukkonen, 2014). This evidence is used here only to establish the plausibility of a medically informed intellectual background; it is not treated as proof that the dietary scenes in Hayy ibn Yaqzan encode a technical medical regimen. That distinction is necessary because the present article analyses the philosophical narrative on its own textual terms.

A second body of scholarship is more directly relevant to the present question. Kukkonen (2008) interprets Hayy's ethical development through the relation between nature and Neoplatonic self-perfection, while Zargar (2017) places the tale within a wider tradition in which narrative, reason, and the cultivation of virtue are mutually implicated. La Martire (2022) likewise

stresses that Hayy's intellectual and spiritual isolation has a practical ethical dimension rather than representing a purely private escape from the world. From an explicitly ecological perspective, Maafa (2022) draws attention to restraint, non-consumerism, and the protection of the island's living environment. These studies establish that Hayy's treatment of plants and animals is ethically meaningful; however, they do not make the regulation of bodily need—especially the linked questions of food type, quantity, timing, regenerative capacity, and care—the central unit of analysis.

The author's previous studies approached Hayy ibn Yaqzan from a broader medical-semiotic perspective. Almaamari (2023) examined medical signs, the body–soul relation, anatomy, sensory knowledge, experimentation, and dietary practices across the narrative, while Almaamari (2025) extended that inquiry to the interaction of medical, philosophical, and spiritual signs, including fire, hunting, nutrition, moderation, and experiential learning. Those studies are necessary points of departure because they show that bodily and dietary material is already part of the author's published research. The present article therefore does not claim novelty merely by identifying food, moderation, plants, or animals in the tale. Its contribution lies in restricting the corpus and reconstructing a specific decision sequence: a perceived bodily or natural sign is interpreted as need or vulnerability, that interpretation governs a decision about use or restraint, and the same pattern eventually extends from self-maintenance to care for other living beings.

2. MATERIALS AND METHODS

The primary material was Ibn Tufayl's Arabic Hayy ibn Yaqzan in the Hindawi edition (Ibn Tufayl, 2011). Lenn E. Goodman's scholarly English translation was consulted for comparison and for the English rendering of conceptually dense passages (Ibn Tufayl, 2009). The Arabic text remained primary whenever the analysis depended on terms relating to nourishment, need, seed, growth, abundance, or care. Secondary scholarship was used to establish the philosophical and ethical context and to test the interpretation against existing readings; it was not used as a substitute for the primary text.

A purposive textual corpus was defined before analysis. The unit of selection was not an isolated lexical item such as “water,” “plant,” or “food,” but a scene or passage in which a resource enters a meaningful relation with bodily or vital need. A passage was included when it met at least one of three criteria: (1) a natural resource was directly connected with preservation or maintenance of the body; (2) Hayy made an explicit decision concerning the kind, amount, frequency, or manner of resource use; or (3) Hayy responded to an observable need affecting a plant, an animal, or access to a necessary resource. This procedure was designed to prevent the corpus from expanding into a general catalogue of nature imagery.

The final corpus comprised six functional units: early nourishment through milk, fruit, and water; the use of fire in transforming food; the conceptual association of nutrition and growth in plants and animals; classification and selection of food resources; regulation of consumption through seed preservation, avoidance of depletion, and limits on quantity and frequency; and care for plants and animals through watering, feeding, removal of injury, and restoration of access to water. These units are not treated as six equal thematic sections. The first three establish the bodily and epistemic background, whereas the final three carry the main argument concerning selection, restraint, and care.

The study used qualitative discourse analysis combined with a deliberately limited functional semiotic reading. Each selected unit was entered into the same five-part analytical matrix: sign, need, interpretation, decision, and consequence/care. “Sign” is used operationally rather than as a claim that Ibn Tufayl adopts a modern semiotic theory. It denotes an observable condition that becomes meaningful for action: hunger and weakness in the body, mature seed in fruit, abundance or scarcity in a resource, thirst or injury in a living being, or an obstruction that prevents water from reaching it. Applying the same sequence to all six units makes the interpretive procedure explicit and allows another reader to reconstruct how the corpus was selected and how each passage was compared.

Two interpretive safeguards were applied. First, practices that resemble contemporary sustainability, conservation, or stewardship were described initially in the vocabulary and teleology of the narrative before being compared with modern analytical terms. Second, passages on dissection, the heart, sensory organs, and specialised medical terminology were excluded even though they are important elsewhere in the tale, because they were central to the author's earlier medical-semiotic studies and do not answer the present research question (Almaamari, 2023, 2025). The method is therefore intentionally selective: it seeks depth within a bounded sequence rather than exhaustive coverage of every natural or medical sign in Hayy ibn Yaqzan.

3. RESULTS AND DISCUSSION

3.1. Bodily need and natural nourishment

Hayy's relation to natural resources begins before he possesses a theoretical vocabulary for them. The doe's milk sustains him in infancy; as he grows, she leads him to ripe fruit and water. The narrative thus establishes nourishment and hydration as immediate conditions of bodily continuity (Ibn Tufayl, 2011). Yet the scene also establishes a pattern that persists throughout the tale: bodily need is first encountered through concrete signs and practical responses. Hunger is answered by food, thirst by water, exposure by forms of protection. At this stage there is no articulated ethics of resource use, because the dominant problem is survival. The importance of these early episodes lies in providing the baseline from which later restraint becomes intelligible.

The relation becomes conceptual when Hayy compares plants and animals and recognizes nutrition and growth as functions shared by both. The Arabic text defines nutrition as replacing what has actually been dissolved from the nourished being through matter transformed into a likeness of its substance, thereby preserving the individual and completing its measure (Ibn Tufayl, 2011). This formulation situates food within a physiology of continuity: a living body is subject to loss and therefore requires material replacement. Hayy's later dietary discipline must be read against this premise. He cannot simply renounce food without qualification, because the body has a real claim grounded in its mode of life. Kukkonen's studies of the work repeatedly emphasize that Hayy's philosophical ascent is embodied and staged through successive forms of engagement with nature rather than achieved by ignoring the material world (Kukkonen, 2008, 2014, 2016).

Fire adds an experimental dimension to this relation. Hayy learns through direct encounter that fire can transform edible matter, and cooked animal food becomes part of his practical repertoire. This episode belongs to the broader pattern of learning by observation, trial, comparison, and inference that scholarship has identified as fundamental to Hayy's autodidactic development (Baroud, 2019; Almaamari, 2023, 2025). For the present argument, however, the significance of fire is limited: it shows that technical capacity expands what Hayy can consume. The later dietary rules then place a check on that expanded capacity. Knowledge of how to obtain or transform a resource does not, in itself, justify unrestricted use. The narrative moves from competence to self-limitation, and this transition prepares the more explicit regulation of bodily need.

3.2. Regulating the consumption of natural resources

The most concentrated account of regulation occurs when Hayy concludes that the body must be preserved but its demands must not dominate his higher discipline. He therefore sets limits concerning the kind of food, its quantity, and the interval between meals (Ibn Tufayl, 2011). This tripartite structure is analytically important because it turns eating from an episodic act into a rule-governed practice. "What," "how much," and "when" are treated as distinct decisions. The body's need is acknowledged, but appetite is no longer allowed to determine the entire field of action. Zargar (2017) is useful here because his account of Ibn Tufayl places practical self-formation within the narrative's pursuit of virtue and perfection; the dietary rules are best understood as part of that disciplined formation rather than as an autonomous nutrition code.

His classification of food begins with three broad sources: plants that have not completed their growth, ripe fruits that have produced seed capable of generating their like, and edible animals from land or sea. The classification is not nutritionally taxonomic in the modern sense; its relevance lies in the consequences of taking each resource. When several options are available, Hayy prefers a form of consumption that interferes least with the completion or continuation of the living thing. Ripe fruit therefore occupies a privileged position because its nourishing flesh can be consumed while its mature seed is preserved. The seed is not to be eaten, destroyed, or discarded in a place unsuitable for germination (Ibn Tufayl, 2011; Ibn Tufayl, 2009).

The seed is the clearest example of how a natural object acquires practical sign-value. It is not merely a remainder of the fruit. Its maturity indicates a capacity for generation, and that perceived capacity changes what Hayy regards as permissible conduct. The interpretive sequence is therefore: mature seed → recognition of reproductive potential → preservation of the seed → possibility of continued plant life. The semiotic point is modest but important: perception becomes ethically consequential when Hayy reads a present feature in relation to a future state. This is more precise than treating the seed as a generalized "symbol of sustainability." The text itself supports the narrower claim that knowledge of generation constrains consumption.

The same principle governs less preferred plant foods. Hayy is to select what is most abundant and strongest in reproduction, while avoiding destruction of roots or seed. If plant resources are unavailable and he turns to an animal or its eggs, he again chooses from the more numerous kind and avoids eliminating an entire species (Ibn Tufayl, 2011). Two criteria thus operate together: the immediate requirement of the eater and the continuing capacity of the consumed population or plant to persist. Somma's work on animal goods in Avicennian philosophy is relevant as a comparative intellectual context because it shows how medieval Islamic philosophy could understand living species teleologically, in terms of goods and perfections proper to their forms of life (Somma, 2022). Ibn Tufayl's narrative is not simply reproducing Avicenna's argument, but Hayy's refusal to frustrate the completion of living beings belongs to a recognizable philosophical concern with teleology and providence.

This practice has understandably invited ecological interpretation. Maafa (2022) reads the island narrative in terms of interconnectedness, restraint, and resistance to consumerism, and Kukkonen (2008) emphasizes the ethical significance of Hayy's relation to the natural order. Such readings illuminate real features of the text, but the vocabulary of sustainability must remain analytical rather than historical. Hayy does not formulate a general environmental policy, calculate resource stocks, or separate ecological preservation from metaphysical purpose. His restraint follows from a desire not to oppose the ends he perceives in created beings and from his effort to order bodily life in accordance with a higher model of perfection. The conservation effects—preserving viable seed, avoiding uprooting, preferring abundance, and refusing species extermination—are explicit; the modern conceptual label is not.

Quantity and timing complete the regulation. Hayy eats only enough to satisfy hunger and does not return to food until weakness begins to hinder the activities required by his discipline (Ibn Tufayl, 2011). These rules are as important as the choice of resource because they relocate authority from availability to bodily sufficiency. A resource may be present in abundance, yet presence alone does not justify further consumption. The threshold is the body's condition: hunger authorizes eating; sufficiency terminates it; renewed debilitating weakness reopens the need. This is not a recommendation to imitate Hayy's regimen as a modern health practice. Rather, it is evidence that Ibn Tufayl makes bodily sensation part of a moral and epistemic economy of self-regulation.

The distinction also clarifies the relation between health and asceticism in the tale. Hayy does not seek bodily maximization, pleasure, or even health as an independent end. Nor does he seek bodily destruction. He preserves the body because its continued functioning is necessary for the practices through which he pursues intellectual and spiritual perfection. La Martire (2022) is helpful in resisting an interpretation of Hayy's solitude as merely negative withdrawal: the narrative repeatedly converts isolation into practical self-government. Food regulation exemplifies that movement. Bodily need is legitimate, but it must be measured so that it neither collapses into neglect nor expands into domination by appetite.

This functional relation is the study's central semiotic finding. The relevant sign is not an ornamental symbol but a perceptible condition that produces a practical inference: bodily sign → recognized need → measured response. A comparable structure operates in Hayy's reading of abundance and reproductive capacity: natural sign → interpretation of continuity or vulnerability → decision to consume, preserve, or abstain. Earlier studies by the author identified dietary moderation and the medical significance of food within the wider semiotic network of the tale (Almaamari, 2023, 2025). The present analysis differs by treating decision-making itself as the object of inquiry and by showing that the same interpretive pattern governs both self-maintenance and later care. The novelty therefore lies not in adding another list of medical or environmental motifs, but in reconstructing the relation among perception, need, restraint, and action.

3.3. From bodily need to the care of living beings

The final movement of the corpus shifts the object of attention. Hayy no longer reads only the signs of his own body or the regenerative capacity of resources he might consume. He begins to respond to visible need in other living beings. If a plant is deprived of sunlight, hindered by another growth, or affected by thirst, he removes the impediment or waters it. If an animal is injured, hungry, or thirsty, he removes the source of harm and provides food or water. When an obstacle prevents water from reaching a plant or animal, he removes the obstruction (Ibn Tufayl, 2011; Ibn Tufayl, 2009). The scene is striking because it transforms observation into assistance: the perceived condition of another organism becomes a reason for action.

The structure is continuous with the earlier regulation of food. Hunger in Hayy's body prompts nourishment; thirst in a plant prompts watering; hunger in an animal prompts feeding; obstruction of water prompts corrective action. What changes is the ethical radius of interpretation. The observational competence first used for self-preservation is extended to the vulnerability of other living beings. This extension also prevents a narrowly anthropocentric reading of the selected passages. Hayy remains

the interpreting and acting subject, and his ultimate purpose is still self-perfection, yet plants and animals are not treated merely as interchangeable supplies. Their growth, reproduction, thirst, injury, and access to water matter as conditions to which he deliberately responds.

This transition can be summarized as observation → recognition of need → interpretation → regulated action → care. The term “care” is preferable here to a stronger claim about modern animal rights or environmental justice. Somma (2022) notes, in discussing the broader Islamic philosophical context, that Ibn Tufayl’s Hayy is a notable case in which concern for animals and plants is connected with imitation of providential order. Kukkonen (2008) likewise treats Hayy’s relation to nature as integral to his ethical ascent. These readings support the view that assistance to living beings is philosophically structured, while the present analysis adds that the structure is continuous with the earlier semiotics of bodily need: in both cases, an observed deficiency becomes a reason for proportionate response.

The philosophical context remains essential. These acts occur within Hayy’s attempt to imitate what he understands of the heavenly bodies and their beneficial effects on the lower world. Care for plants and animals is therefore integrated into a programme of self-discipline and spiritual ascent rather than presented as an autonomous environmental ethic. Iraqi’s Arabic monograph on Ibn Tufayl is useful at this point because it treats nature, the world, the soul, divine attributes, and conjunction as parts of one metaphysical architecture rather than as disconnected themes (Iraqi, 1992). Kukkonen (2016) similarly situates the tale within Ibn Tufayl’s larger philosophical project, while Field (2023) emphasizes that its trajectory ultimately exceeds discursive rationality and culminates in a mode of experience that resists complete propositional expression. The practical scenes analysed here should consequently be read as stages within that ascent: bodily regulation is not the final wisdom of the tale, but it is one of the disciplines through which Hayy orders his embodied relation to the world.

At the same time, the bounded corpus reveals a coherent practical logic that deserves analysis in its own right. Bodily preservation is necessary, but necessity is not treated as a licence for unrestricted consumption. It is limited by sufficiency, abundance, reproductive potential, and eventually by responsiveness to the needs of other organisms. The sequence therefore contains a double movement: inward, toward the disciplined reading of hunger and weakness; and outward, toward the reading of seed viability, species abundance, thirst, injury, and access to water. The natural world is both material support and a field of signs through which conduct is educated. This is the point at which the study’s discourse-semiotic perspective contributes something distinct from a purely ecological or philosophical reading.

The relevance to natural resources and human health is consequently historical and conceptual rather than pharmacological. The text does not provide an experimentally testable therapeutic intervention, clinical outcome, or nutrient-composition analysis. What it does provide is a premodern model in which bodily maintenance, dietary sufficiency, resource regeneration, and the needs of other living beings are placed within one system of practical judgment. This distinction defines both the contribution and the limit of the study: it addresses the cultural history of natural-resource use for human well-being, not the biomedical efficacy of a natural product.

Table 1. Functional coding of the selected textual corpus

Textual unit	Observable sign	Interpreted need	Decision	Consequence
Early nourishment	Milk, fruit, water	Bodily continuity	Consume available nourishment	Survival and growth
Nutrition and growth	Loss requiring replacement	Maintenance of living body	Seek nourishment	Preservation of the individual
Fruit and seed	Viable mature seed	Future regeneration	Preserve seed	Possibility of new plant growth
Plants and animals	Abundance / reproductive capacity	Avoid depletion	Prefer abundant resources; avoid uprooting or extermination	Resource continuity

Textual unit	Observable sign	Interpreted need	Decision	Consequence
Bodily regulation	Hunger, sufficiency, weakness	Measured bodily requirement	Eat, stop, or resume	Limited consumption
Care of living beings	Thirst, hunger, injury, blocked water	Need of another organism	Water, feed, remove harm or obstruction	Care and restored access to resources

4. CONCLUSIONS

The selected passages in Hayy ibn Yaqzan form a coherent sequence in which natural resources are progressively incorporated into a discipline of bodily need. Nourishment first appears as a condition of survival and as a shared function of living bodies. It is then regulated through the kind, quantity, and timing of food, with explicit attention to viable seed, abundance, reproductive capacity, and avoidance of species depletion. Finally, the interpretive competence used to regulate Hayy's own hunger and weakness expands into responses to thirst, hunger, injury, and obstruction affecting plants and animals. The six-unit corpus therefore supports a single argument rather than a catalogue of motifs: the text moves from need, to restraint, to care.

This movement should not be presented as evidence that Ibn Tufayl formulated a modern theory of sustainability, nutrition, or environmental health. Its immediate framework is the philosophical and spiritual education of Hayy, and its teleology differs from contemporary ecological science. Nevertheless, the narrative offers a historically significant representation of resource use in which preservation of the human body is constrained by sufficiency and by attention to the continuity and vulnerability of other living beings. The distinction matters methodologically: historical specificity is preserved without denying the text's capacity to illuminate enduring questions about need, consumption, and responsibility.

For research on natural resources and human health, the value of this reading is historical, conceptual, and ethical rather than pharmacological. It documents a premodern discourse in which food, bodily maintenance, resource regeneration, and care are placed within one philosophical sequence. Its main limitation is equally clear: textual analysis cannot establish nutritional efficacy, therapeutic value, or biological effects. The study instead contributes to the history of health-related natural-resource knowledge and demonstrates how a bounded corpus can distinguish the present argument from the author's broader medical-semiotic studies of the same work (Almaamari, 2023, 2025). Future comparative research could examine similar patterns in Arabic medical-adab texts, philosophical narratives, or traditions of animal and plant ethics, while maintaining the distinction between historical conceptual resemblance and modern scientific evidence.

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