Food, Movement, and the Equalisation of Spacetime

Why every living thing must eat — hunger as a T-field depletion signal, movement as the closing of an interval, and death as the exhaustion of the T-budget

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Tau (T) is the living fabric of time itself — the sole substance of which all physical reality is composed. Every particle, force, wavelength, and conscious experience is a structured configuration of T-flow. There is no gravity, no electromagnetic force, no strong nuclear force as separate entities: all are registers of the single T-field operating across dimensional levels. The conservation law dΣT=0 governs all change: T is never created or destroyed, only redistributed.

Abstract

Every living thing on Earth eats. Not most — every one, across every kingdom, phylum and register of life. Biology can tell us in exquisite detail how hunger works and how a meal becomes motion, yet it has never said why simply existing should cost a resource that must be paid again and again until the day it cannot be paid at all. The Universal Force of Time answers from first principles, and it needs no biology to do it. Food is stored time — sunlight caught by photosynthesis and locked into carbon. Hunger is the T-field reporting, through the body's own lattice, that the reservoir has fallen below the level a node needs to hold its place. Every movement is the closing of a spacetime interval: the body spends stored T to carry itself from where it is to where it intends to be. Death by starvation is simply the moment the T-budget reaches zero and no interval can be closed — not even the interval of a heartbeat. The requirement to eat is therefore not a biological accident. It is what existence inside a T-field universe must look like. Eleven propositions (P-EAT-1 to P-EAT-11) carry the argument; the doors through which solar time enters the living world are shown to sit, exactly, on the lattice of 2, 3, 5 and π.

If you have not got time in the form of energy to balance the equation as you move through the spacetime dimension in which you live, then you cannot move. You cannot exist.

Master proposition P-EAT-0 · Stephen Daubney

1. The question science has not asked

Biology describes hunger with precision. Leptin falls, ghrelin rises, the hypothalamus reads a caloric deficit, and appetite begins. Biochemistry matches it stride for stride: glycolysis, the Krebs cycle, oxidative phosphorylation, the minting of ATP. These are true and careful accounts of how hunger feels and how a meal becomes usable energy.

But neither has answered the deeper question. Why does a living thing need energy at all? Why should the mere fact of being here — holding the body together, breathing, thinking — spend a resource that must be endlessly topped up? And why, when that resource is withheld long enough, does existence end completely and for good? Why is the bond between food and life so absolute that no creature has ever been found anywhere that escapes it?

The Universal Force of Time answers this without borrowing a single fact from biology. It needs only the structure of the T-field, the node-and-interval architecture set out in earlier papers, and the one identity at the root of everything: T is matter is energy is existence. From these alone, the requirement to eat follows as a matter of logic.

P-EAT-1

The requirement of all life to eat is not a biological contingency. It is the direct physical consequence of the T-field's node-interval architecture: every action a living thing performs is the closing of an interval, every closure spends stored T, and the reservoir must therefore be refilled. To eat is to replace what existence continuously spends.

2. Food is stored time

Food is stored time. That is the whole of it, and it is the point this paper exists to put over: the time was caught from sunlight, locked into carbon, and is waiting in every mouthful to be spent.

The Sun is the great T-generator of the solar system. In its core it turns mass into T-radiation and broadcasts it outward in every direction. A plant catches a little of that flood. Inside a leaf, chlorophyll absorbs photons — packets of solar time — and uses them to drive a single reaction: carbon dioxide and water are bound into glucose and oxygen. The T that left the Sun eight minutes earlier is now held in the bonds of a sugar molecule, waiting. What we call a calorie is a measure of exactly this: stored time.

The doors through which that light enters are not placed at random. A leaf takes in its strongest light near 432 nm (= $2^4 \times 3^3$) and lets the surplus go again near 648 nm (= $2^3 \times 3^4$) — the two faces of the number 864 (= $2^5 \times 3^3$), the very same 864 that sets the Sun's diameter in miles and the Earth's day in seconds. The two reaction centres of photosynthesis sit on the lattice just as cleanly. Photosystem II works at 680.24448 nm (hydrogen's own ionisation, 13.6048896, stepped × 50); photosystem I at 700.3320213 nm (the weight of nitrogen, 14.00664043, stepped × 50). The first splits water; the second builds sugar. Life

does not improvise its grip on the Sun. It reaches through doors cut to the lattice of 2, 3, 5 and π (Figure 2, appendix).

P-EAT-2

All food, without exception, is stored time. Every calorie in every food source is solar time that was caught by photosynthesis, locked into carbon chemistry, and passed through one or more living registers before being eaten. The source is always the same: the Sun.

From there the path to motion is short and unbroken. Metabolism prises the T back out of the carbon bonds and repackages it as ATP, the cell's small change. When the body acts, ATP is spent and the stored T is released into the interval the body means to cross (Figure 1, appendix). Sun to photon to glucose to ATP to movement — one current of time, changing its dress at each step but never its nature.

→ Want the photosynthesis doors in full? See the companion paper: Chlorophyll and the Two Photosystems.

→ Want the carbon-storage account in full? See the companion paper: The Universal Force of Time and CO_2.

3. Hunger is a depletion signal

Hunger is felt the world over as an insistent discomfort that drives a creature to find and eat food. The Universal Force of Time says plainly what that discomfort is reporting. It is the T-field speaking through the body's own lattice, telling the organism that its store of time has dropped below the level a node needs to keep its place and go on closing the intervals of living. It is not a design quirk or a minor nuisance. It is a governor — the mechanism that makes a creature refill before it can no longer function at all.

P-EAT-3

Hunger is the T-field registering, through the organism's own lattice, that its stored T-reservoir has fallen below the threshold required to hold nodal stability and sustain biological interval closures. It is a T-budget warning: refill, before the intervals that matter most can no longer be equalised.

4. Movement is the closing of an interval

Every physical act a living thing performs — at every scale, from a single protein to the whole body — is the closing of an interval, and every closure costs stored T. This is not a loose comparison with the node-interval picture of earlier papers. It is that same machinery, running at the register of life.

A creature at rest holds a T-field address — it is a node. To move, it injects stored T into the interval between where it is and where it intends to be. The T equalises that interval, the movement completes, and the creature settles into a node at the new address. The T it spent is gone from the reservoir and must, in time, be replaced. A myosin motor stepping along a filament, a heart muscle squeezing blood through the body, an arm rising into the air — the same event at three scales, each paid for in stored sunlight.

P-EAT-4

Every physical movement is the closing of an interval. The organism injects stored T into the spacetime interval between its present register address and its target; the T equalises the interval; the movement completes; nodal status is re-established. The T spent must eventually be replenished.

P-EAT-5

The T-cost of an action is proportional to the interval it closes. Small intervals — a blink, a pointed finger — cost little; large ones — running, lifting — cost much. Added T-field mass raises the resistance of the interval and so raises the T needed to cross the same distance.

→ Want the node-and-interval foundation in full? See the companion paper: The Nodal Time Axiom.

5. The T-budget the body keeps

The body runs a structured budget of time across several stores, each with its own speed of access and its own density of T. When food is withheld, the order of spending is not arbitrary: the T-field draws from the fastest store first and the slowest last, guarding structural T — the time woven into the body's own lattice — until every other option is gone. The full ledger is given in Table 1 of the appendix; in brief it runs ATP, then glycogen, then fat, and only at the end the body's own protein.

P-EAT-6

The body's tiered storage (ATP → glycogen → fat → protein) is the T-field's biological implementation of T-budget management. The order of access is governed by register preservation: structural T is spent last. When the body must burn its own structure, it has entered terminal T-deficit.

6. Air, water, food — three registers of time

The old survival rule — three minutes without air, three days without water, three weeks without food — is not a set of arbitrary thresholds. It is a hierarchy of T-provision. Each substance feeds the body at a different register, and the time a creature lasts without it measures how quickly that register fails when the supply is cut. Air carries T to the most immediate, molecular register; withdraw it and ATP synthesis halts within minutes. Water is time in liquid form, the medium every T-transaction in the body flows through; lose it and the pathways themselves degrade over days. Food is the deep reservoir; spend it down over weeks and, store by store, the intervals can no longer be closed. Table 2 of the appendix sets the three side by side.

P-EAT-7

The three-tier survival hierarchy (air → water → food) is a T-field register hierarchy. Air provides T at the immediate molecular register; water provides the medium through which all biological T-transactions are conducted; food provides the stored reservoir. The more immediate the register, the faster the failure when it is withdrawn.

7. Death by starvation: the budget runs out

The hunger striker offers the cleanest demonstration of the whole mechanism, precisely because the withdrawal is voluntary, total, and watched. Air and water remain; only the metabolic reservoir is withheld. What the Universal Force of Time predicts — and what observation confirms — is that the capacity to close intervals fails in exact step with the remaining budget. The costliest actions go first: running, then walking, then standing, then large arm movements, then fine control, and at the very last the smallest and most vital closures of all, the heartbeat and the breath. The body does not fail at random. It fails in strict order of T-cost, holding the essential intervals open until the absolute end.

P-EAT-8

Death by starvation is the exhaustion of the T-budget to the point at which no spacetime interval can be equalised at any biological register. It is not the failure of ‘life’ in the abstract. It is the precise physical moment at which the stored reservoir reaches zero and T can no longer be injected into any interval — including the heartbeat and the breath. The node collapses because there is no time left to hold it.

The striker does not die because the body ‘gives up’ or because some life-force is snuffed out. They die because the T-field runs its programme to completion: stores depleted in sequence, closures shed in order of cost, until the last T is spent on the last possible interval — and then there is nothing left to spend. The flow stops. Existence within the spacetime dimension ends.

8. What it means to be alive

This account leads to a definition of life that owes nothing to reproduction or metabolism and everything to T-field mechanics. Life is not a state a thing is in. Life is a process a thing does — the ceaseless, simultaneous, many-register act of injecting T into the intervals of its own existence. A bacterium does it at the molecular register alone, but does it without pause. A tree does it at every structural register. A whale does it from molecule to whole animal. The scale varies enormously; the mechanism is identical. The instant the process becomes impossible — the instant the budget cannot fund even the smallest necessary closure — it stops. That stopping is what we call death. Its continuation is what we call life.

P-EAT-9

Life is the continuous, simultaneous, multi-register process of T-injection into biological intervals that constitutes a living thing's existence within the T-field. Death is the cessation of this process. Life is not a state; it is a process — and the requirement to eat is the requirement that the process continue.

9. The car and the creature

The structure that carries a car from the garage to the shop is the same structure that carries an arm from your side to over your head. This is not a tidy metaphor. It is one T-field mechanism at two registers, drawing on two different stores of time. The car waits in the garage, a node. Its engine, when running, is stored energy — and stored energy is itself stored time — which it injects into the interval between garage and shop. The car crosses the interval and arrives at a new node. The creature sits at rest, decides to raise its arm, and releases stored solar T — sunlight caught a few months ago, processed into ATP — into the interval between the arm's position and its target. The arm closes the interval and settles at a new node. In both cases the T spent must be paid back: the car at the pump, the creature at the next meal.

P-EAT-10

The movement of a vehicle and the movement of a limb are the same T-field event at different registers. Both are interval closures powered by stored T. The vehicle draws on stored energy, which is itself stored time; the organism draws on solar time. The mechanism — T injected into spacetime, the interval consumed, nodal status re-established — is identical.

10. The universal requirement

No creature has ever been found that does not need an external source of time. None makes T from nothing. Every living thing, without a single exception, must draw on stored solar time — either directly, as plants do through photosynthesis, or at one remove, as animals do by eating plants or one another. This is not a biological coincidence waiting for an explanation. It is a T-field necessity, and biology has been confirming it all along.

P-EAT-11

The universality of the requirement to eat — its presence in every life form across every domain of life — is a T-field prediction confirmed by biology. No organism can create T from nothing, because T is not created: it flows from the Sun through the T-field programme, is stored in carbon chemistry, and is released by metabolism. Every living thing is a node in that flow. None stands outside it.

11. Conclusion

The requirement of all life to eat is not a biological contingency. It is a necessity that follows from the structure of a T-field universe. Food is stored time, caught from sunlight. Hunger is the field reporting that the reservoir has run low. Every movement is the closing of an interval, paid for in stored T; without that T, no interval can be closed. Death by starvation is the exact moment the budget reaches zero. And life is not a state but a process — the unbroken, many-register act of spending time to hold a place in the spacetime dimension. To eat is simply to keep that process going.

Seen this way, a meal is not fuel in the ordinary sense. It is a transfer of time itself, caught by a leaf from a star and handed forward, register to register, until it becomes the lift of an arm or the next beat of a heart. We do not merely consume the Sun's light. We borrow its time, and we spend it living.

Propositions established

P-EAT-0
Without time in the form of energy to balance the equation of the spacetime dimension, you cannot move. You cannot exist.

P-EAT-1
The requirement to eat is the direct physical consequence of the T-field's node-interval architecture.

P-EAT-2
Food is stored time; every calorie is time caught from sunlight by photosynthesis and locked in carbon.

P-EAT-3
Hunger is the T-field registering, through the organism's lattice, that the reservoir is below the threshold for nodal stability.

P-EAT-4
Every physical movement is an interval closure: T is injected, the interval equalised, nodal status re-established.

P-EAT-5
The T-cost of an action is proportional to the interval it closes and to the T-field mass involved.

P-EAT-6
The body's tiered storage (ATP → glycogen → fat → protein) is T-budget management; structural T is spent last.

P-EAT-7
The survival hierarchy (air → water → food) is a T-field register hierarchy; the more immediate the register, the faster the failure.

P-EAT-8
Death by starvation is the exhaustion of the T-budget to the point at which no interval can be equalised at any register.

P-EAT-9
Life is the continuous, multi-register process of T-injection into biological intervals; death is its cessation.

P-EAT-10
Movement of a vehicle and movement of a limb are the same T-field interval-closure event at different registers and sources.

P-EAT-11
The universality of eating is a T-field prediction: no organism creates T from nothing; all draw on stored solar time.

Related papers in the index

Daubney, S. — The Universal Force of Time and CO_2.

Daubney, S. — The Nodal Time Axiom.

Daubney, S. — Chlorophyll and the Two Photosystems.

Daubney, S. — The Water Molecule.

Appendix A — Figures

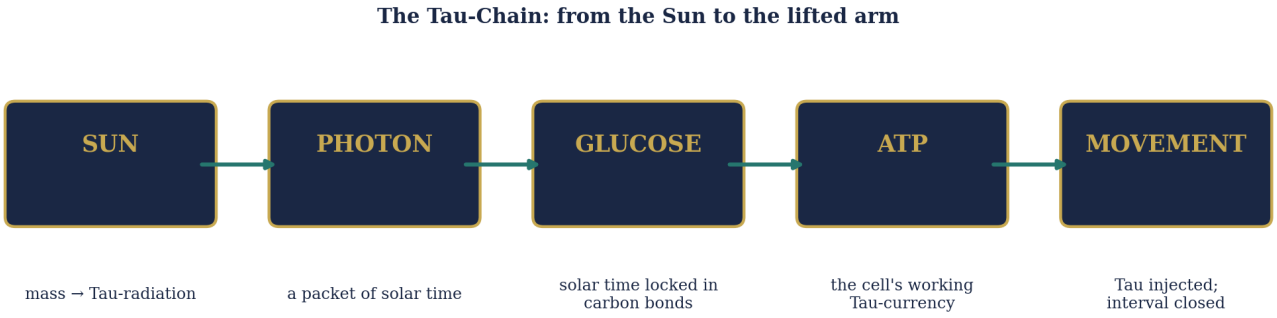

Figure 1. The T-chain. One current of time changes its dress at each step — Sun, photon, glucose, ATP, movement — but never its nature.

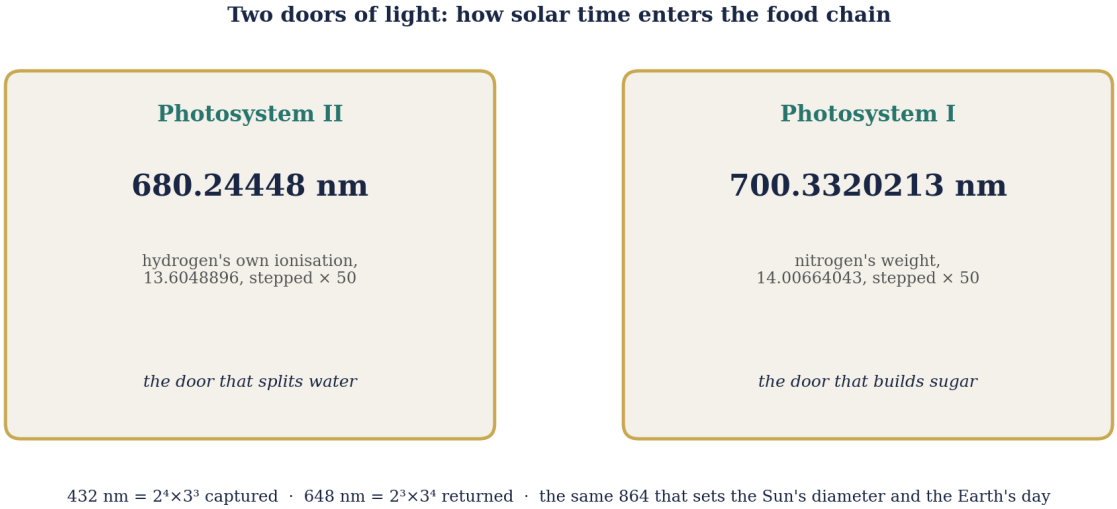

Figure 2. The two doors of light. Photosystem II opens at hydrogen's ionisation stepped × 50; photosystem I at nitrogen's weight stepped × 50. Both sit on the lattice of 2, 3, 5 and π.

Appendix B — Tables

Table 1. The body's tiered T-budget, spent fastest store first and structure last.

T-store	Biological form	Duration	T-field function
Immediate T	ATP in the cell	seconds	direct interval closure at the molecular register
Short-term T	glycogen (liver, muscle)	about a day	rapid-release T for sustained closures
Medium-term T	body fat (adipose)	weeks	dense storage for long-duration nodal maintenance
Structural T	protein (muscle, organ)	last resort	T woven into the lattice; spending it degrades the node

Table 2. Air, water and food as three registers of T-provision.

Substance	T-field identity	Survival without	Failure mode
Air (oxygen)	T-carrier for cellular combustion	about 3 minutes	ATP synthesis halts; molecular closures cease; critical organs fail in minutes
Water	time in liquid form — the body's T-medium	about 3 days	the aqueous T-medium degrades; ion gradients collapse; T-pathways fail
Food	stored solar time in carbon chemistry	about 3 weeks	reservoir depleted in sequence (glycogen, fat, protein) until no interval can be closed

Appendix C — The conversion loop

A T-value wears many quantities at once. These operators let a reader walk any one face of a value into any other — the same gears that carry a food-energy figure into a wavelength, a free fall, a frequency, a mass.

Step	Operator
energy (eV) → energy (kJ)	÷ 10368 ($2^7 \cdot 3^4$)
energy (kJ) → wavelength λ	÷ 36 ($2^2 \cdot 3^2$)
wavelength λ → free fall g (T-flow)	÷ 49.50355350 (3888/25π)
free fall g → frequency f	× 6.283185307 (2π)
free fall g → energy (joules)	÷ 24 ($2^3 \cdot 3$)
wavelength λ → mass (λ-door)	× 1.233700550 ($\pi^2/8$)
energy (eV) → circumference C	÷ 31104 ($2^7 \cdot 3^5$)
circumference C → mass (circ-door)	÷ 22.00157933 (1728/25π)
free fall g → speed of light c	$c = g^2 \times 3{,}110{,}400$ ($864 \cdot 3600 = 2^9 \cdot 3^5 \cdot 5^2$)

Direct laws: E = 6.822485557·m (m = 1.465741469·E); λ = 0.810569469·m = 8m/π²; eV = 373248·λ ($2^9 \cdot 3^6$); f = 0.102880658·m (25/243).

A note on the numbers

The values in this paper are written as bare numbers — no units, no powers of ten attached to their meaning — because a T-value is a single number standing across every register at once. The same value can present as a wavelength, a span of time, a mass, or an angle, depending only on the register from which it is read. We do not resolve a quantity ‘to the power of’ in one dimension and call that its nature; the number itself is the invariant, and the dimension is the dress it happens to be wearing when measured. Read every figure here in that spirit: one number, many faces.