

A Just Eudaimonia

The Everyday Fabric of a Shared Life and the Praxis of Flourishing

[Working Draft]

On the Cultivation of Habit and Household, the Unfolding of Each Within a Common Field,
and a Flourishing That Justice Constitutes

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君子之道，造端乎夫婦；及其至也，察乎天地。

*The way of the noble person takes its rise in the relation of husband
and wife;*

in its furthest reach, it is discerned in heaven and earth.

君子素其位而行。

The noble person acts from the place where he is.

A good life is not secured and then lived;
it is the unfolding, of each and of both, of a life tended in common.

《中庸》 *Zhongyong* (The Doctrine of the Mean), ch. 12 and ch. 14; and a remark
of the author's own.

For her,

with whom the first name was made

that no one else could read,

and in whose eyes I first saw

that I had been seen seeing.

结发为夫妻，恩爱两不疑。

To the one I love most.

Abstract

This paper, the eleventh in a series on the philosophy of intimacy and the theory of justice, develops the empirical praxis of the good relation whose conditions the prior paper established in the abstract. Where the prior paper held that the practice of a good relation is the cultivation of a field rather than the construction of a structure, that the matter of this field is the everyday sensory and habitual fabric of a shared life, and that a good field satisfies two conditions, the eudaimonic and the just, of which the just constitutes rather than merely constrains the eudaimonic, the present paper asks how a shared life is in fact cognised, practised, assessed, and sustained across its course. It treats that course as a cycle, and the cycle as its primary object: a recurrence of cognition, practice, evaluation, reflection, and renewed cognition, turning across the time of a relation from its beginning, through its marriage, into its later years. The cycle is shown to be a real cycle in the dynamical sense, not a linear sequence of stages but a self-sustaining movement whose persistence is the condition of the relation's existence, so that the cessation of the cycle is not a relation at rest but a relation extinguished.

Five frameworks for the cognition and practice of flourishing are distinguished, the positivist, the evidentialist, the normative, the virtue-theoretic, and the phenomenological, and they are treated not as competing theories of one measurable object but as the symmetry-broken phases, in the sense of the prior paper, of an object no single framework possesses. The frameworks are the resources the cycle draws upon at the moments suited to each, and the paper proceeds by traversing the moments of the cycle in turn, drawing the appropriate frameworks into each. A cognitive and computational basis for the whole is established first: appraisal, before it is an explicit measurement, is a continuous and largely unconscious inference upon the partially observable state of a relation, conducted in a value that is not symbolised, and formalised as the belief updating of a decision process whose objective is itself revised by its running, which is the decision-theoretic form of the prior paper's thesis that there is no fixed meta-value-grammar. On the free-energy reading of this inference, the continual appraisal by which a relation is maintained is the activity by which it holds itself in existence, and the cessation of appraisal is the beginning of its extinction.

The paper carries three commitments through its length. The first is an operational concession: a practice requires what is assessable, and the paper therefore restricts itself, where it must assess, to value as structured into an assessable proxy, in the explicit awareness that the proxy is not the value the prior papers held to be transversal across the registers and irreducible to symbolisation. This is the first occasion in the series on which an incomplete value is adopted deliberately, and it is the honest discharge of the prior result rather than its abandonment. The second commitment concerns the assessment of justice: a relation's distribution of returned value, taken relative to a baseline set by the coupling of the parties, is shown to admit a statistical signature, the skewness of the distribution, by which the exploitation of one party within an apparently satisfying relation becomes visible where aggregate measures of

satisfaction conceal it. The justice of a relation's value cycle is rendered, under the concession, as a testable hypothesis about the symmetry of a return distribution against a coupling-based baseline, modelled as a branching process on the relational network. The third commitment concerns the cycle as a whole: the cycle accumulates a phase, in the sense of the prior paper's holonomy, and its regime is fixed by two independent questions, whether it persists and, if it persists, what sign of phase it accumulates. Three regimes follow, the flourishing spiral of a persisting cycle of positive phase, the catastrophic cycle of a persisting cycle of negative phase, and the extinction of a cycle that ceases to turn, with the passage between them understood as a bifurcation. Justice is shown to be the internal condition of the flourishing spiral and not a constraint upon it, since a relation whose return distribution is severely skewed cannot accumulate a positive phase for the party consigned to its low-return tail.

In keeping with the thesis that no single framework possesses the whole, the paper terminates not in a synthesis but in plural conclusions, each stated to the boundary of its framework, and it holds throughout that the flourishing of a shared life is cultivated and not constructed, assessed in proxy and not possessed, and sustained as an open spiral and not secured as a state.

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1. Introduction

This paper is the eleventh in a series on the philosophy of intimacy and the theory of justice, and it takes up the empirical task the prior paper deferred. The prior paper established that the practice of a good relation is the cultivation of a field rather than the construction of a structure, that the matter of this field is the everyday sensory and habitual fabric of a shared life, and that a good field satisfies two conditions, the eudaimonic and the just, of which the just constitutes rather than merely constrains the eudaimonic. It established these as conditions, in the abstract, and it deferred to a subsequent paper the question of how a shared life is in fact cultivated, assessed, and sustained in the more empirical register of habit, household, and the quality of a life lived together. The present paper takes up that question.

The question is how flourishing is known, practised, assessed, and reconceived across the course of a shared life. The course of a shared life is treated here as a cycle, and the cycle as the primary object: a recurrence of cognition, practice, evaluation, reflection, and the renewed cognition that follows, turning across the time of a relation from its beginning through its marriage and its later years. The cycle is not a linear sequence of stages completed once. Its moments interpenetrate and feed back upon one another, and one of them, evaluation, runs through all the others as an unbroken undercurrent rather than occupying a single station. The cycle is, moreover, the condition of the relation's existence. A relation in which value ceases to be generated and returned, in which the parties cease to revise their sense of one another, in which practice halts, is a relation whose cycle has stopped; and a relation whose cycle has stopped does not persist in a steady state but decays. The continued turning of the cycle is the condition of the relation's survival, and the character of its turning, whether it spirals upward, repeats at a loss, or winds down, is the difference between a flourishing life, a life of slow catastrophe, and the extinction of the bond.

The frameworks by which flourishing is known and assessed are treated, in this paper, as resources the cycle draws upon rather than as the primary object. Positivism, evidentialism, normative theory, virtue ethics, and phenomenology each furnish an epistemology and a practice of flourishing, and each is drawn upon at the moments of the cycle to which it is suited; but none governs the cycle as a whole, and the absence of a single governing framework is, as the prior papers established, not a defect but the condition of an object no single framework possesses. The frameworks are the symmetry-broken phases, in the sense of the prior paper, of the cognition and practice of flourishing; the cycle is the movement across them.

The paper carries three commitments that run through its length. The first is an operational concession. The paper is a practice, and a practice requires what is operable and what is assessable; it therefore restricts itself, where it must assess, to value as structured into an assessable proxy, and it does so in the awareness that the structured proxy is not the value that the prior papers held to be transversal across the registers and irreducible to symbolisation. This is the first occasion in the series on which an incomplete value is chosen deliberately, and the choice is the honest discharge of the prior result rather than its abandonment: since the value that is real cannot be cashed without occupying the place of the barred Other, the

honest course, where assessment is required, is to concede that what is assessed is a proxy and to bear responsibility for its incompleteness. The second commitment concerns the assessment of justice: a relation's distribution of returns is shown to admit a statistical signature, the skewness of the distribution of value returned relative to the coupling of the parties, by which exploitation within an apparently satisfying cycle becomes visible. The third concerns the cycle as a whole: the cycle accumulates a phase, in the sense of the prior paper's holonomy, and the sign of that phase distinguishes the good cycle from the bad, while the persistence of the cycle distinguishes both from extinction.

The paper is the programmatic and foundational text of the part of the series concerned with the praxis of flourishing, and it is written at the length and the level of detail that a foundation requires, in the expectation that the subsequent papers will draw upon the instruments it develops rather than re-deriving them. Its scope is correspondingly broad: it situates its conception within the philosophy of well-being and the theory of justice, develops the cognitive and dynamical apparatus of the lifecycle, treats each moment of the cycle through the several frameworks, develops the quantitative assessment of justice and surveys the existing instruments of measurement, traces the cross-cultural variation of flourishing and its practice, displays the apparatus on an extended case, and meets the objections its approach invites.

The paper proceeds as follows. It surveys the frameworks and states its method (§2), and situates its conception within the philosophy of well-being and the theory of justice (§3). It recapitulates the dynamical-systems vocabulary it will employ (§4); establishes the cognitive and computational basis of appraisal, in which evaluation is shown to be a continuous and largely unconscious inference before it is an explicit measurement (§5); and specifies the lifecycle as a real cycle whose persistence conditions the relation's survival (§6). It sets out, in an analytic matrix, the contribution of each framework at each moment in both its epistemological and its practical layer (§7), and then treats the moments of the cycle in turn, cognition (§8), practice (§9), evaluation (§10), reflection (§11), and re-cognition (§12), each as the site at which several frameworks are drawn upon for the task proper to it. It considers the cycle as a whole, in its three regimes of flourishing, catastrophe, and extinction (§13); displays the whole apparatus on an extended longitudinal case (§14); traces the cross-cultural variation of flourishing and of the practices of marriage and family (§15); states its foundational role in the series and the instruments it bequeaths to the papers that follow (§16); meets the objections its approach invites (§17); and concludes in plural conclusions (§18). A formal appendix gathers the notation and the key concepts (§A) and develops the spectral, decision-theoretic, and dynamical formalisations the main text employs (§B).

2. Background and Method

This section surveys the frameworks the paper draws upon, states their relation to one another, and declares the methodological concession under which the paper's assessments are made. The frameworks are surveyed not as competitors among which the paper selects, but as the resources the cycle of a shared life draws upon at the moments suited to each. Five are distinguished, by

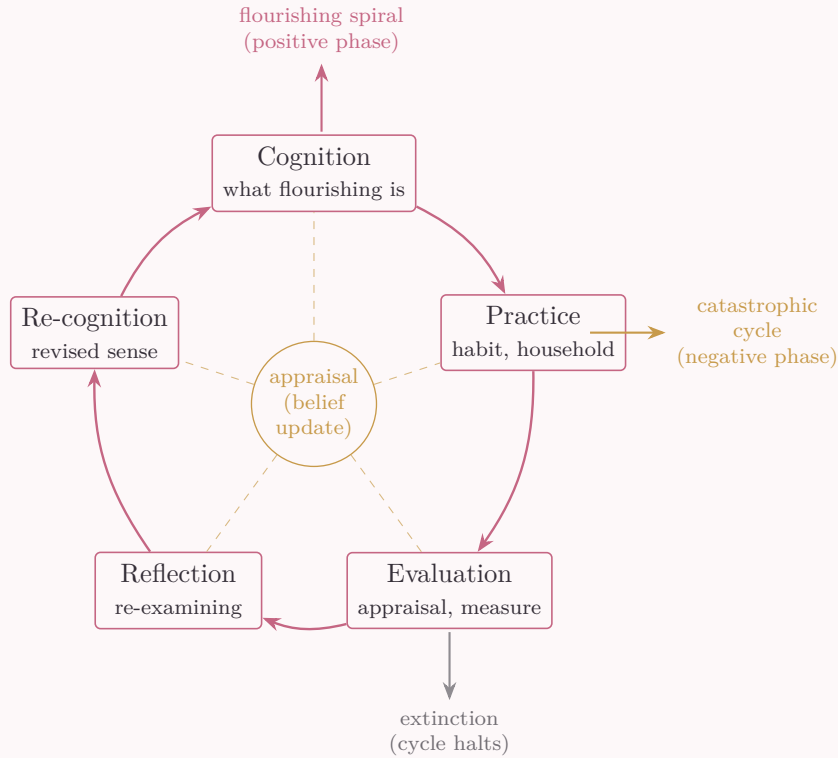


Figure 1: The lifecycle of a shared flourishing as a cycle. The five moments (cognition, practice, evaluation, reflection, re-cognition) interpenetrate and feed back rather than forming a linear sequence. Evaluation, as the continuous and largely unconscious updating of a belief about the state of the relation, runs through every moment (the inner spokes) before it is ever an explicit measurement. The persistence of the cycle is the condition of the relation’s survival; the sign of the phase it accumulates over a turn distinguishes the flourishing spiral from the catastrophic cycle, and the halting of the cycle is extinction.

the epistemology of flourishing each carries.

2.1 Five frameworks for the cognition and practice of flourishing

Positivism, in the sense the paper employs, is the position that flourishing is an observable and measurable matter of fact, accessible through its indicators and tractable by quantification. Its developed form in the study of well-being is the tradition of subjective well-being, in which well-being is operationalised as life satisfaction together with the balance of positive over negative affect, and measured by validated instruments [13]. The hedonic tradition that underwrites these measures is gathered in Kahneman et al. [35], and its instruments include scales of positive and negative affect [68] and of quality of life [71]. Alongside the subjective measures stand the objective indicators of quality of life, the measurable conditions of a life, and the apparatus of psychometrics by which any such measure is assessed for reliability and validity. The positivist commitment is that what cannot be brought, however indirectly, to measurement cannot be a matter of knowledge in the strict sense.

Evidentialism, as a practical epistemology, is the position that a belief, and the practice founded on it, ought to be proportioned to the evidence, and revised as the evidence revises. In the study of flourishing its developed form is evidence-based practice, in which an intervention

is warranted by the weight of controlled evidence that it produces the effect claimed for it. Evidentialism is not identical to positivism, though the two are allied: positivism concerns what flourishing is, an observable fact, while evidentialism concerns how belief about flourishing ought to be formed and updated, by proportioning to evidence. The distinction matters to the paper, because evidentialism, in its deeper form, is the epistemology of belief revision as such, and so reaches below the explicit weighing of studies to the continuous updating of belief that the paper locates at the basis of all appraisal (§5).

Normative theory is the position that flourishing is not exhausted by what is the case but involves what ought to be valued: that a good life is constituted by ends there is reason to hold worthy, and not merely by the satisfaction reported or the conditions observed. Its most developed contemporary form, and the one most consonant with this series, is the capabilities approach, in which the measure of a life is the substantive freedom of a person to be and to do what that person has reason to value, the capabilities rather than the achieved functionings alone [45, 57]. The approach has a precedent in the recovery of an Aristotelian conception of flourishing as vulnerable to circumstance [44]. The capabilities approach is consonant with the series because its central notion, the substantive freedom to unfold what one has reason to value, is closely allied to the conception of flourishing as the unfolding of each party's own dynamics that the prior papers developed.

Virtue ethics is the position that flourishing, eudaimonia in its classical sense, is the activity of a life in accordance with excellence of character, and that such excellence is acquired through habituation. In Aristotle the virtues are states of character, formed by the repeated performance of the corresponding actions until they become a settled disposition, a *hexis*; eudaimonia is then the activity of the soul in accordance with these acquired excellences over a complete life [4]. The contemporary recovery of this conception, against the modern reduction of ethics to rules, is owed in large part to MacIntyre [39], and its extension to the virtues of acknowledged dependence to MacIntyre [40]. The Confucian tradition of self-cultivation supplies a parallel account, in which the person is formed through sustained cultivation, ritual practice, and the ordering of the household and its manners, the good life being an attained and maintained cultivation rather than a state secured once [63]. The classical sources of this tradition include the *Analects* [11] and the doctrine of the mean [2]. Both traditions locate flourishing in the formation of disposition through habit, and both thereby connect the cognition of flourishing to its practice in a way the other frameworks do not, which is why virtue ethics is the framework proper to the practical moment of the cycle (§9).

Phenomenology and hermeneutics together name the position that flourishing is lived and interpreted before it is measured: that it is given, in the first instance, as the felt quality and the understood meaning of a life, and that this givenness is not a defective approximation to a measurable fact but the matter itself, to which any measure is answerable. The phenomenological tradition supplies the account of the lived and intersubjective texture of experience on which the prior papers drew; the account of perception and the lived body is owed to Merleau-Ponty [42], and the diagnosis of the reduction of the lived world to its measurable indicators to Husserl [30]; the hermeneutic tradition supplies the account of understanding as the interpre-

tation of meaning within a circle that cannot be exited for a view from nowhere. Against the positivist commitment, this framework holds that the reduction of flourishing to its measurable indicators discards precisely what flourishing is, and that the understanding of a shared life is closer to the interpretation of a text than to the reading of an instrument. The structure of such understanding, as a circle that cannot be exited for a view from nowhere, is developed by Gadamer [19].

2.2 The frameworks as symmetry-broken phases

These five frameworks are not five candidate theories of one measurable object, among which evidence will eventually decide. They are five phases, in the sense the prior paper gave the term, of the cognition and practice of flourishing: each is the determinate form the understanding of flourishing assumes under the conditions of a particular discipline and a particular task, and none is the undivided structure of which the others are partial views. The positivist measures what can be measured and is silent on what cannot; the phenomenologist describes what is lived and resists its reduction to measure; the normative theorist specifies what ought to be valued and cannot guarantee its realisation; the virtue theorist describes the formation of disposition and cannot legislate character; the evidentialist proportions belief to evidence and is mute where evidence cannot reach. Each says, in its own broken phase, what no other can say, and each is silent where another speaks.

The relation among them is therefore not one to be resolved by the victory of one framework, nor by their eclectic combination into a single super-framework, which would be the metalanguage the series has argued does not exist. It is the relation of a polyphony to a truth that no single voice possesses, and the burden of the cycle is to draw upon each at the moment to which it is suited, without subordinating the others to it. This is the methodological inheritance of the prior paper, transposed from the disciplines of the theoretical papers to the frameworks of the practical one, and it is a dialectical-materialist rather than a relativist commitment: the frameworks are partial determinations, each from its position, of a flourishing that is real and in production, and not so many incommensurable language games among which there is no fact.

2.3 The operational concession

A practice requires what is operable and what is assessable. The cultivation of a shared life proceeds by actions that can be taken and revised, and its revision requires some assessment of whether the cultivation tends toward the good. But the prior papers established that the value at issue in a relation is transversal across the three registers, emergent on their coupled dynamics, and not exhausted by any symbolisation; and they established that to fix such a value in a determinate, possessable structure, to cash it, is the operation of settling, and the occupation of the place of the barred Other. There is, accordingly, a tension at the centre of any practical and assessing treatment of flourishing: assessment requires that value be structured into an assessable form, and the value that is real resists exactly that structuring.

The paper meets this tension by a concession it states openly and bears throughout. Where it must assess, it restricts itself to value as structured into an assessable proxy, and it holds that this proxy is not the value the prior papers established to be irreducible. The structured proxy is an instrument of practice, warranted by its operational use, and it is not a representation of the real value, which it cannot be. This is the first occasion in the series on which an incomplete value is adopted deliberately rather than diagnosed as a failure, and the adoption is the honest discharge of the prior result rather than its reversal. Since the real value cannot be cashed without occupying the place of the Other, the honest course, where a practice must assess, is not to claim that the assessment reaches the real value, which would be that very occupation, but to concede that what is assessed is a proxy, to use it for what it is operationally worth, and to bear responsibility for its incompleteness. The concession governs every assessment the paper makes, and most consequentially the quantitative assessment of justice in §10, whose results are to be read as operationally valid and not as the measurement of a relation's real worth.

The concession also fixes the standing of the explicit, instrumented evaluation that the positivist framework supplies. That evaluation is not thereby disparaged. It is, on the contrary, indispensable to a practice, since a practice without assessment cannot be revised; and the structured proxy it yields is, within its operational limits, a real gain, public, comparable, and accumulable in a way that the unstructured appraisal is not. The concession is not a verdict against measurement but a specification of its standing: the measure is an operationally warranted proxy for a value it does not reach, to be used as such and not mistaken for the value itself. The paper now turns to the vocabulary in which the cycle and its regimes will be described.

3. The Philosophy of Well-Being and the Theory of Justice

The paper's conception of a just eudaimonia stands in two philosophical lineages that a foundational treatment must make explicit: the philosophy of well-being, which asks what a good life consists in, and the theory of justice, which asks what is owed among those who share a life. This section locates the conception within each, not to derive it from them, since it was developed on the independent grounds of the prior papers, but to situate it, to mark its agreements and departures, and to make available to the later argument the distinctions these literatures have drawn.

3.1 The philosophy of well-being

The philosophy of well-being distinguishes three families of theory of what makes a life go well, a division owed in its canonical form to Parfit [47]. Hedonistic theories hold that well-being consists in the balance of pleasure over pain, of positive over negative experience; the good life is the happiest life, and the tradition descends through the classical utilitarians and Sidgwick [59]. Desire-fulfilment theories hold that well-being consists in the satisfaction of a person's desires, whether or not the satisfaction is experienced as pleasant; the good life is the life in which what

one wants is achieved, and the theory has the advantage of grounding a person's good in that person's own valuing rather than in an external standard. Objective-list theories hold that certain things are good for a person whether or not they are desired or found pleasant, that there is a plurality of goods, knowledge, friendship, achievement, virtue, and the like, whose possession makes a life better independently of the person's attitude toward them; the good life is the life furnished with the items on the list.

The conception of this series stands in a determinate relation to these three. It is not hedonistic: the paper has argued at length that the felt satisfaction of a life is a structured proxy that a forged flourishing can satisfy (§11.1), and that a relation may produce a high balance of positive affect while being, in its distribution of return, unjust and therefore no eudaimonia. It is not a simple desire-fulfilment theory: the paper has held that the value at issue is not exhausted by what the parties happen to want, since a party may, through habituation to a diminished position, cease to want what the foreclosure of their unfolding has put beyond reach, so that the satisfaction of their now-diminished desires is compatible with the foreclosure of their flourishing. The conception is closest to an objective-list theory, in that it holds the unfolding of each party's own dynamics, and the justice of the cycle that sustains it, to be good for the parties whether or not they are felt or desired; but it differs from the standard objective-list theory in two respects. It does not offer a list of goods but a structure, the open spiral of a returning cycle, within which the goods of a particular shared life are generated rather than enumerated in advance; and it grounds the objectivity of this structure not in an external standard imposed on the parties but in the dynamics of generation and return that the prior papers derived, so that what is good for the parties is what their own generative activity, justly sustained, produces. The conception is, in the vocabulary of the philosophy of well-being, an objective-list theory whose single item is a structure rather than a content, and whose objectivity is that of a generative process rather than of an imposed standard.

3.2 The theory of justice

The condition of justice that the series holds to be constitutive of eudaimonia stands in relation to the principal contemporary theories of justice, and the relation illuminates both what the paper's justice condition is and what it adds. The dominant modern theory of distributive justice, owed to Rawls, concerns the fair distribution of primary goods, the goods any rational person is presumed to want, among them not only income and opportunity but the social bases of self-respect, and it assesses a social arrangement by the principles that would govern this distribution were they chosen from behind a veil of ignorance [50]. The paper's justice condition is distributive in form, since it concerns the distribution of returned value among the parties of a relation, and the skew of the return distribution (§10.3.3) is a measure of distributive injustice within the relation; the inclusion, among Rawls's primary goods, of the social bases of self-respect is of particular pertinence, since the party consigned to the low-return tail is deprived not only of returned value but of the self-respect that being returned to sustains.

A second tradition, relational egalitarianism, holds that the concern of justice is not in the first instance the distribution of goods but the character of the relations in which people stand,

that justice obtains when people relate as equals rather than when goods are distributed by a pattern, and that the point of equality is the abolition of relations of domination, exploitation, and subordination [1]. The paper's justice condition is, in this respect, relational as much as distributive: the injustice it identifies is the reduction of one party to the sustaining fuel of a relation, a relation of exploitation and subordination within the shared life, and the skew of return is the signature of such a relation and not merely of an unequal distribution. The two construals, the distributive and the relational, are for the paper two aspects of one condition, the distribution of return being the measurable trace of the relational standing of the parties.

A third tradition supplies the connection to recognition. The debate between redistribution and recognition, joined by Fraser and Honneth, concerns whether injustice is fundamentally a matter of maldistribution, to be remedied by redistributing goods, or of misrecognition, the failure to accord a person or group due standing, to be remedied by recognition [16]. The paper's account integrates the two: the return of value to its generator is at once a redistribution, the circulation of value back to the party who produced it, and a recognition, the acknowledgement of that party as a generator whose contribution is owed a return rather than a source from which value may be taken without acknowledgement. The skew of return measures a maldistribution; the foreclosure of unfolding (§10.5) measures a misrecognition, the failure to accord a party the standing of one whose own development matters; and the paper holds these to be two faces of a single injustice, as the redistribution-recognition debate, in its more integrative resolutions, has come to hold.

A fourth tradition, the ethics of care, is the one nearest the paper's subject matter and the one whose insight the paper most directly formalises. The care tradition, arising from Gilligan's identification of a moral voice oriented to responsibility and relationship rather than to abstract right [22], and developed into a political and philosophical ethics by Held and others [24], holds that the care through which dependents are sustained is morally central and systematically undervalued, and that a just account of social life must reckon the labour of care as labour rather than effacing it as natural or freely given. Kittay's analysis of dependency and the labour it requires is of particular pertinence, since it identifies exactly the sustaining labour whose under-return the paper's skew measure is constructed to detect [36]. The paper may be read as supplying, for the central case of the intimate relation, a formalisation of the care tradition's core claim: that the labour of sustaining a shared life is labour, that it generates value, and that its systematic under-return is an injustice with a measurable signature. The ethics of care supplies the moral insight; the skew of the return distribution offers a structured proxy for its violation.

3.3 The location of the paper's conception

The paper's conception of a just eudaimonia is, in sum, an objective-list theory of well-being whose single item is the structure of a justly returning cycle, joined to a theory of justice that is distributive in its measure, relational in its content, integrative of redistribution and recognition, and formalising of the ethics of care. The conception was not assembled from these positions but developed on independent grounds, and its relation to them is one of convergence

rather than derivation: the prior papers' account of generative justice, the return to the creator, and the unfolding of each arrived, by its own route, at a conception that the philosophy of well-being and the theory of justice illuminate from their several directions. The convergence is itself an argument of a kind, since a conception reached independently and found to gather the insights of several established traditions has a claim to have articulated something the traditions severally approach; but the paper rests its conception on the prior derivation and offers the convergence as corroboration and not as ground.

4. A Recapitulation of the Dynamical Vocabulary

The paper describes the lifecycle of a shared flourishing in the vocabulary of dynamical systems, and the central terms are recalled here in a form sufficient for the use made of them. The recapitulation is brief and non-technical, and it carries forward the qualification, Standard treatments of the notions recalled here are Strogatz [61] and Hirsch et al. [26]. established at length in the prior paper, that the relation is modelled by a dynamical system only as a structural analogy, and that the analogy is subject to the limit there identified, that the law governing a relation is itself reconfigured by what the relation generates, so that no fixed system captures it in full. The vocabulary is employed for what it makes visible, and not as a claim that a relation is a system of the standard kind.

4.1 States, evolution, and trajectories

A dynamical system is specified by a space of states, the configurations the system may occupy, together with a rule of evolution that carries each state to its successor in time. The history of the system is a trajectory through the state space, the path traced as the state evolves under the rule. For a relation, the state space is the space of configurations a shared life may occupy, and the trajectory is the relation's history; the rule of evolution is the relation's own dynamics, which, as the prior paper insisted, is not fixed but is reconfigured by the relation's products, a qualification held in reserve throughout what follows.

4.2 Fixed points, stability, and decay

A fixed point is a state that the rule of evolution carries to itself, a configuration at which the system, once arrived, remains. A fixed point is stable if trajectories that begin nearby are drawn toward it, and unstable if they are driven away. A trajectory that loses the energy or the input sustaining its movement winds down toward a fixed point and there comes to rest. For a relation, the pertinent fixed point is the state in which the relation's movement has ceased, in which value is no longer generated, exchanged, or returned, and the parties no longer revise their sense of one another. This terminal rest is not a benign equilibrium but the cessation of the relation as a living process, and the paper names it extinction (§13). A relation that is not sustained decays toward it.

4.3 Attractors and limit cycles

An attractor is a set of states toward which trajectories from a region of the state space are drawn, and on which they thereafter remain. A fixed point is the simplest attractor. A limit cycle is an attractor of a different kind: a closed trajectory, a loop in the state space, toward which neighbouring trajectories are drawn and along which the system then circulates indefinitely. A limit cycle is a self-sustaining oscillation, a movement that maintains itself by returning, again and again, through a cycle of states rather than coming to rest at a point. The relevance to the present paper is direct: a living relation is modelled not by a fixed point, which would be its cessation, but by a sustained cyclic movement, the lifecycle of cognition, practice, evaluation, reflection, and renewed cognition, which maintains the relation by its continued turning. The persistence of this cyclic movement, rather than the attainment of any resting state, is the mark of a living relation.

4.4 The phase accumulated around a cycle

A system that returns, around a cycle, to its starting configuration in the state space need not return unchanged in every respect. A quantity carried along the cycle may, on return to the starting configuration, fail to coincide with its initial value, and the discrepancy, the phase accumulated around the loop, is the holonomy on which the prior papers turned. A cycle of vanishing holonomy returns everything to where it began, a pure repetition that goes round without rising. A cycle of positive holonomy returns to the starting configuration with a gain, a spiral that ascends as it returns. A cycle of negative holonomy returns with a loss, a winding that depletes as it turns. The distinction between the good and the bad cycle, developed throughout the series, is the sign of this accumulated phase, and it is carried over here to the lifecycle of a shared flourishing: the same five moments may be traversed in a manner that ascends, in a manner that merely repeats, or in a manner that depletes, and the difference is the holonomy of the turn, not the identity of the moments traversed.

4.5 Bifurcation

The qualitative behaviour of a dynamical system may depend on parameters, the slowly varying conditions under which the system evolves. As a parameter is varied, the system's behaviour may change smoothly through a range and then, at a critical value, change in kind: a stable fixed point may lose its stability, a limit cycle may appear or vanish, an attractor may divide. Such a qualitative change at a critical parameter value is a bifurcation. The relevance is that the regime of a relation, whether it sustains a flourishing spiral, settles into a depleting cycle, or decays toward extinction, may not change gradually with its conditions but may shift in kind at a threshold, a small further change in the sustaining conditions carrying the relation across a critical value into a qualitatively different regime. The language of bifurcation is the language in which the paper describes the passage of a relation from one regime to another (§13), and it captures a feature the gradual language of more or less well-being does not, that the difference between a sustained and a collapsing relation can be a difference in kind reached by a small change in degree.

5. The Cognitive and Computational Basis of Appraisal

Before evaluation is an explicit measurement, it is a continuous and largely unconscious inference. The parties to a shared life do not, for the most part, assess their relation by deliberate procedure; they are appraising it constantly, beneath reflection, registering in the texture of an ordinary day whether things are well or ill between them, whether the relation is tending toward warmth or toward distance, whether the shared life is rising or declining. This section establishes that appraisal is, at its basis, an inference upon a partially observable state, conducted in a value that is not symbolised; that the explicit, instrumented evaluation of §10 is a structured proxy laid over this basal inference; and that the framework which best renders the basal process is the framework of belief updating, which is evidentialism reaching below the deliberate weighing of studies to the continuous revision of a belief about an unobservable state.

5.1 Appraisal as a biological process

The appraisal of a situation is, in the first instance, a biological event and not a deliberation. The tradition of appraisal theory in the psychology of emotion holds that emotion arises from an evaluation of a situation with respect to a being's concerns, and that this evaluation runs through rapid, multilevel, largely automatic checks before any of it becomes available to reflection [37, 54]. That emotion and cognition are not separable faculties but aspects of one evaluative process is argued by Pessoa [48], and the constructed and inferential character of emotional appraisal by Barrett [5]. The felt quality of a moment in a shared life, the ease or the disquiet that arrives unbidden after an exchange, is the registration of such an appraisal, an evaluation already accomplished beneath awareness and delivered to consciousness as a feeling. The neuroscience of this process locates it in the rapid integration, by prefrontal and associated circuits, of present perception with prior expectation, and the issuing of an evaluation of the current state on which decision is then based. Crucially, the process operates on quantities the subject does not and cannot fully articulate: the appraisal proceeds in a value that is felt and acted upon before, and often without ever, being symbolised. The basal appraisal is conducted in exactly the unsymbolised value the prior papers held to be the real one.

A component of this process deserves emphasis, because it grounds the connection to the matter of the field. Interoception, the sensing of the body's internal condition, is increasingly understood as itself a process of inference, in which the felt bodily state is the brain's best estimate of the causes of its internal signals, and emotion a reading of this estimate in context [58]. The felt sense of how a relation stands, the bodily ease or unease that is the first and most constant appraisal of a shared life, is on this account an interoceptive inference, and its data are in large part the sensory and habitual fabric the prior paper identified as the matter of the field: the meals, the rooms, the rhythms, the contact, registered in the body before they are formulated in thought. The appraisal of a relation is, at its basis, the body's continuous inference upon the texture of the shared life.

5.2 Appraisal as inference upon a partially observable state

The formal structure of this basal appraisal is rendered by the framework of decision under partial observability. An agent that cannot observe the true state of its world directly, but only through partial and noisy observations, must maintain a belief, a probability distribution over the possible states, and update this belief as observations arrive; it then chooses its actions on the belief rather than on the unobtainable true state. This is the structure formalised as the partially observable Markov decision process, in which a hidden state evolves, the agent receives observations that depend on it, the agent maintains and updates a belief over the hidden state, and the agent selects actions to secure value over time [33]. The general framework of learning to act for value under uncertainty is set out in Sutton and Barto [62].

The structure maps onto the appraisal of a relation with a precision that is instructive, and the mapping carries the commitments of the prior papers into the vocabulary of decision.

The appraisal of a relation as inference upon a hidden state. The basal appraisal of a relation has the structure of inference upon a partially observable state. The true state of the relation is hidden, not observable directly, in keeping with the prior result that the real value of a relation is transversal across the registers and not exhausted by any observation. What is observed is the everyday sensory and habitual fabric of the shared life, the matter of the field, which depends on the hidden state without revealing it fully. Each party maintains a belief, not a determinate verdict but a distribution, over the state of the relation, in keeping with the prior account of relational value as superposed rather than definite. The belief is updated as the fabric is lived, and action, which is practice, is taken upon the belief. The appraisal is thus an inference, conducted in an unsymbolised value, upon a state that no observation discloses in full.

The mapping has a consequence that connects this section to the formal dilemma of the prior paper. A standard process of this kind operates with a fixed value function, a fixed specification of what the agent is to secure. The appraisal of a relation does not. What the parties are to secure, the good of the relation, is itself reconceived across the lifecycle, at the moment of recognition (§12); the value function is rewritten by the process it governs. This is the reflexive reconfiguration of the prior papers, and it reappears here as the non-standard feature that the value function of the relational decision process is not fixed but is revised by the cycle, which is the decision-theoretic form of the thesis that there is no fixed meta-value-grammar.

5.3 Self-maintenance and the imperative to keep inferring

A development of the inferential account binds appraisal to the survival of the relation. On the free-energy account of the functioning of adaptive systems, an organism maintains itself, holds

itself away from the disordered states that would dissolve it, precisely by continually minimising the discrepancy between its expectations and its sensory states, which is to say by continually inferring and acting to make its inferences good [17]. The process-theoretic development of this principle, in which perception and action jointly minimise expected surprise, is given by Friston et al. [18]. Perception, action, and the maintenance of the organism’s own existence are, on this account, one process: to cease to infer and to act upon the inference is to cease to maintain the boundary that constitutes the system, and so to dissolve.

Transposed to the relation, this account supplies the deep form of a thesis the paper will develop in dynamical terms (§13). The continual appraisal of a relation, the unbroken updating of each party’s belief about its state and the action taken upon it, is not an optional accompaniment to the relation but the activity by which the relation maintains itself. A relation in which the parties cease to appraise, cease to update their sense of one another, cease to act upon that sense, is a relation that has ceased to perform the activity by which it holds itself in being, and it dissolves toward the terminal rest of §4.2. The imperative to keep inferring, on this account, is the imperative to keep the relation in existence; the cessation of appraisal is the beginning of extinction.

5.4 The two registers of evaluation

The foregoing establishes a distinction that governs the paper’s treatment of evaluation. There are two registers in which a relation is evaluated. The first is the basal, continuous, largely unconscious inference described in this section: an appraisal conducted in unsymbolised value, upon a hidden state, through the lived fabric of the shared life, and running through every moment of the cycle without occupying any one of them. This is evaluation in its primary and pervasive form, and it is conducted in the real value the prior papers defended. The second is the explicit, instrumented, structured evaluation that the positivist framework supplies and that §10 develops: a deliberate measurement, conducted at particular moments, in which some aspect of the relation is brought to a structured and assessable form.

The relation between the two registers is the relation the operational concession named (§2.3). The explicit evaluation is a structured proxy laid over the basal inference: it takes the unsymbolised belief that the parties continuously maintain and renders some structured aspect of it in a form that can be measured, compared, and accumulated. The proxy is operationally valuable, since the basal inference, precisely because it is unsymbolised, is private, incommunicable, and unaccountable, while the structured measure is public and checkable. And the proxy is incomplete, since the structuring discards exactly the unsymbolised remainder in which the real appraisal is conducted. To evaluate a relation explicitly is to symbolise, for operational use, a belief that is in its nature unsymbolised, and the gain in publicity is paid for in a loss of the real. The paper’s treatment of explicit evaluation in §10 proceeds under this understanding throughout: the measures it discusses are structured proxies for a basal appraisal they do not reach, and evidentialism, which is the epistemology of the basal belief updating itself, is the framework within which both the basal inference and its structured proxy are to be understood.

6. The Lifecycle as a Real Cycle

This section specifies the object the paper takes as primary. The lifecycle of a shared flourishing is a cycle, in the dynamical sense recalled in §4: a sustained cyclic movement that maintains the relation by its continued turning, rather than a linear sequence of stages completed once and for all. The section establishes three things about this cycle: that it is not linear but a movement whose moments interpenetrate and feed back; that its persistence is the condition of the relation's existence, so that the cessation of the cycle is the relation's extinction; and that it turns, across the time of a relation, through nested repetitions from a beginning, through a marriage, into the later years.

6.1 The moments of the cycle, and their non-linearity

The cycle is articulated into five moments: cognition, the apprehension of what the flourishing of this shared life consists in; practice, the cultivation and the action through which it is pursued; evaluation, the assessment of how the relation stands; reflection, the re-examination of that assessment and of the cognition that framed it; and re-cognition, the revised apprehension with which a further turn of the cycle begins. These are moments and not stages. A stage is completed and left behind; a moment is a recurring aspect of a movement that is always, in some measure, engaged in all of them at once. The parties do not first complete their cognition of the good, then practise, then evaluate, then reflect, then begin again. They practise on a cognition that is still forming; they evaluate continuously, as §5 established, while they practise; their reflection revises their practice mid-course; and their cognition is reconceived without waiting for a turn of the cycle to be complete. The moments interpenetrate and feed back upon one another, and the articulation into five is an analytic device for treating, in turn, aspects of a movement that does not in fact proceed in turn.

One moment in particular refuses localisation. Evaluation, as the basal and continuous appraisal of §5, is not one station of the cycle but an undercurrent running through all of them: the parties are appraising the state of the relation while they cognise its good, while they practise, while they reflect, and while they reconceive. The treatment of evaluation as a distinct moment (§10) concerns its explicit and instrumented form, the deliberate measurement undertaken at particular junctures; the basal evaluation, the unbroken belief updating, pervades the whole. The cycle is, in this respect, a movement with a continuous monitoring of its own state, in the manner of a system that maintains itself by never ceasing to estimate where it stands.

6.2 The persistence of the cycle as the condition of the relation

The central claim of the section concerns what the turning of the cycle is for. It is not that the cycle is a useful description of a relation that would exist in any case. The turning of the cycle is the activity by which the relation exists, and its cessation is the relation's end.

The persistence of the cycle is the condition of the relation's existence. A relation is a living process maintained by the continued turning of its cycle, and not a state that, once attained, persists of itself. The continued generation of value, its circulation and return, the unbroken appraisal of the relation's state, and the practice taken upon that appraisal, are the activity by which the relation holds itself in being, in the manner of a self-maintaining system that exists only so long as it continues to infer and to act (§5.3). A relation in which this activity ceases does not persist in a quiescent but intact condition; it decays toward the terminal rest in which value is no longer generated or returned and the parties no longer revise their sense of one another. The cessation of the cycle is therefore not a relation at rest but a relation extinguished. To be in a living relation is to be engaged in the continued turning of its cycle; to cease the turning is to let the relation lapse.

This claim distinguishes the present account from any treatment of relational well-being as a state to be reached and thereafter possessed. There is no state of a achieved flourishing that, once secured, maintains itself without the continued activity of the cycle, just as there is no fixed point of a living relation that is not its cessation (§4.2). The good of a shared life is not banked; it is generated, again and again, in the turning, and a relation that ceases to generate it does not hold what it had but loses it. The implication for practice is developed throughout the paper: the work of a shared life is not the attainment of a condition but the sustaining of a movement, and the most consequential failure is not the failure to reach a state but the cessation of the turning.

6.3 The cycle across the time of a relation

The cycle turns, and a relation is many turns of it, nested and accumulating. A single exchange may be a small turn, cognised, practised, appraised, reflected upon, and reconceived within an afternoon. A season of a relation is a larger turn, and the passage from courtship to a settled life, from a settled life through its trials, into the later years, is the largest turn the paper considers. These turns are nested: the small turns compose the seasons, and the seasons compose the arc of a shared life. The marriage at which a relation may arrive is not the end of the cycle but a transformation of its conditions, after which the same moments recur under altered circumstances, the cognition of the good revised by years of shared practice, the practice settled into the habits and household of §9, the evaluation informed by a long history, the reflection deepened, and the re-cognition carrying forward what the prior turns have accumulated.

This accumulation across turns is the lifecycle's holonomy (§4.4). The re-cognition with which a turn ends is not identical to the cognition with which it began; the difference, accumulated over a turn, is the phase the turn has acquired, and accumulated over many turns, it is the long ascent or the long decline of a shared life. A relation whose turns accumulate a positive phase rises across its history, its cognition of the good deepening, its practice enriching, its parties developing through their shared life into more than they were. A relation whose turns

accumulate a negative phase declines across its history, however intact its form, depleting its parties turn by turn. And a relation whose cycle ceases to turn neither rises nor declines but ends. These three possibilities, the rising spiral, the declining cycle, and the cessation, are the three regimes the paper treats as a whole in §13, after it has traversed the moments of a single turn. The paper now enters the cycle at its first moment, the cognition of what the flourishing of a shared life consists in.

7. The Frameworks across the Moments: An Analytic Matrix

The frameworks of §2.1 are drawn upon at the moments of the cycle to which each is suited, and the paper's treatment of the moments (§8 through §12) develops this drawing-upon in prose. Because the relation of five frameworks to five moments is not easily held in view across the sections that develop it, this section sets it out in a matrix, which serves as a map of the treatment to follow and as a statement, in compact form, of the foundational claim that each framework contributes a distinct epistemology and a distinct practice at each moment. The matrix distinguishes two layers, since each framework, at each moment, both cognises the moment's object in a characteristic way, its epistemological layer, and guides the moment's action in a characteristic way, its practical layer. The two layers are presented in two tables, the first for the epistemology and the second for the practice.

The matrix is to be read as an analytic device and not as a partition. The moments interpenetrate (§6.1), and the frameworks are not assigned exclusively to moments but are each available at each moment, more central at some and more peripheral at others; the entries record the characteristic contribution of each framework at each moment, the contribution the prose develops where it is most consequential. A cell records how a given framework, at a given moment, takes up that moment's task, and the reader tracing a single framework down a column will find its distinctive standpoint maintained across the moments, while the reader tracing a single moment across a row will find the polyphony of frameworks that the moment draws upon.

The two tables together state, in compact form, the foundational structure the paper develops: that the cognition and the practice of a shared flourishing are conducted at five moments, that each moment draws upon five frameworks, and that each framework contributes, at each moment, both a way of cognising the moment's object and a way of guiding its action. The prose of the sections that follow develops the cells of this matrix where each is most consequential, the normative and the virtue-theoretic at the moment of cognition (§8), the virtue-theoretic and the evidential at the moment of practice (§9), the positivist most fully at the moment of evaluation (§10), and the reassertion of the unsymbolised and the just at the moments of reflection and re-cognition (§11, §12). The matrix does not replace that development, since the prose alone can state the tensions among the frameworks and the qualifications each entry requires; it provides the map within which the development is to be read, and the assurance that the treatment of the moments, though it foregrounds the framework most consequential at each, rests on the full matrix of frameworks and moments that this section sets out.

Table 1: The epistemological layer: how each framework cognises the object of each moment of the cycle.

Framework	Cognition	Practice	Evaluation	Reflection	Re-cognition
Positivist	Flourishing as a measurable matter of fact	Practices as interventions with measurable effects	Measurement by validated instruments	Measures read against their limits	Revision of measured baselines
Evidentialist	Belief about the good proportioned to evidence	Supported practices, warranted by controlled evidence	Belief updating on the evidence of the lived fabric	Re-proportioning of belief as evidence revises	Carrying forward the updated belief
Normative	Flourishing as the substantive freedom of each to unfold	Practice as the realisation of capability	Assessment against the specification of just flourishing	Whether the specification was met, and at whose cost	Re-specification of the good in light of the turn
Virtue-theoretic	Flourishing as activity in accordance with cultivated excellence	Habituation; formation of <i>hexis</i> and family manner	The state of the dispositions formed	Whether the dispositions are excellences or their contraries	Disposition carried forward, deepened or narrowed
Phenomenological	Flourishing as lived and interpreted before measured	Cultivation of attention to the shared life	Thick description; the felt and meant quality	The lived meaning the measures discarded	The reopened, unsymbolised apprehension

8. Cognition: What the Flourishing of a Shared Life Consists In

The cycle is entered at the moment of cognition, the apprehension of what the flourishing of this shared life consists in. The task of this moment is not the measurement of a flourishing already defined, which belongs to evaluation, but the prior apprehension of what is to count as flourishing for these two, in this life: the framing within which all subsequent practice and assessment proceed. Three frameworks are drawn upon at this moment, the normative, the virtue-theoretic, and the phenomenological, and each contributes a distinct component to the cognition; the moment closes by stating the normative specification of a just flourishing on which the paper’s later evaluation will rest.

8.1 The normative component: flourishing as the unfolding of each

The normative framework supplies the cognition that flourishing is not the satisfaction reported nor the conditions possessed but the substantive freedom of each party to unfold what that party has reason to value. The capabilities approach is the developed form of this cognition: the measure of a life is the range of beings and doings genuinely open to a person, the capabilities, and not merely the functionings achieved or the resources held [45, 57]. Transposed to the shared life, the cognition is that the flourishing of the relation is the substantive freedom of each party to unfold that party’s own dynamics, the development of each into what each has it in them to become, sustained rather than foreclosed by the shared life.

This cognition fixes two things the other components and the later evaluation depend on. It fixes that flourishing is plural and not aggregate: it is the unfolding of each, and not a single quantity of relational satisfaction to which both contribute and in which their distinct

Table 2: The practical layer: how each framework guides the action of each moment of the cycle.

Framework	Cognition	Practice	Evaluation	Reflection	Re-cognition
Positivist	Specify measurable targets for the shared life	Adopt practices with established effects	Administer the instruments; compute the proxies	Do not possess the measure as the truth	Reset targets to the new baseline
Evidentialist	Form belief about the good in proportion to evidence	Employ supported practices within their limits	Update belief on the lived evidence	Revise belief; resist over-confidence in the measure	Begin the turn on the revised belief
Normative	Specify what this shared life ought to value	Make room for each party's capability to unfold	Test return and unfolding against the specification	Reassert the question of justice	Re-specify the good for the next turn
Virtue-theoretic	Discern the excellences this shared life requires	Cultivate, do not legislate, the dispositions (§9.2)	Read the dispositions formed	Guard against the hardening of habit into rule	Carry the cultivated disposition into the turn
Phenomenological	Attend to the lived sense of the good for these two	Cultivate the quality of attention	Describe thickly; refuse the metric's last word	Return the question to the unsymbolised register	Reopen the apprehension for the next turn

developments are merged. A shared life has not flourished if it has produced a large sum of satisfaction unevenly distributed, with one party developed and the other foreclosed; the unfolding is of each, severally, or it is not the flourishing the cognition specifies. And it fixes that flourishing is a freedom and not a state: it is the openness of each party's development, the capability of unfolding, and not a particular condition attained, which preserves at the level of cognition the thesis that flourishing is not a state to be banked but a movement to be sustained.

The distinction the capabilities approach draws between a capability and a functioning bears directly on the cognition of a shared flourishing, and it is worth drawing out. A functioning is a being or doing achieved; a capability is the substantive freedom to achieve it, whether or not it is in fact achieved. The distinction matters because a shared life may produce achieved functionings, a party who is fed, housed, and occupied, while foreclosing the capability of which they are the husk, the party's substantive freedom to have done and become otherwise. A relation in which one party's functionings are provided for, but in which that party has no real freedom to pursue the developments they have reason to value, has supplied the functioning and foreclosed the capability, and it has not, on this cognition, sustained that party's flourishing. The point guards against a characteristic misreading of a shared life, in which the provision of a comfortable condition is taken for the flourishing of the one provided for; the cognition the normative framework supplies is that flourishing is the freedom to unfold, and that a comfort which forecloses the freedom is the mark of a foreclosure and not of a flourishing. The cognition also fixes what the later evaluation must therefore attempt, the assessment not merely of what each party has and does but of what each party is genuinely free to become within the shared life, which is the most demanding of the things the evaluation is asked to proxy and the one its proxies reach least adequately (§10.5).

8.2 The virtue-theoretic component: flourishing as activity in accordance with cultivated excellence

The virtue-theoretic framework supplies a cognition the normative framework leaves implicit: that the unfolding of a party's dynamics is not a spontaneous expansion but an activity in accordance with excellences that are cultivated, and that the shared life is among the principal sites of their cultivation. In the Aristotelian account, eudaimonia is the activity of a life in accordance with excellence of character, and such excellence is acquired by habituation, the repeated performance of the corresponding actions until they settle into a disposition [4]. In the Confucian account, the person is formed through sustained self-cultivation, much of it conducted in the ordering of the household and the practice of its daily observances [63]. The conception of the person as constituted in relation, and of autonomy as itself developed rather than presupposed, is consonant with the self-determination tradition in psychology [51]. The cognition these traditions supply is that the flourishing of a shared life is not only the freedom of each to unfold but the activity of each, in accordance with excellences that the shared life cultivates, so that the relation is not merely the condition under which each develops but a principal medium of the development.

This component connects the cognition of flourishing to its practice, and so prepares the moment of practice (§9). Because the excellences in accordance with which a life flourishes are cultivated by habituation, the cognition of what flourishing consists in already points toward the formation of habit and the ordering of a common life as the means of its pursuit. The virtue-theoretic cognition is, in this respect, the cognition that flourishing must be practised into being, and it forbids in advance any conception of the good life as a condition that could be secured otherwise than through the cultivation of disposition over time.

The virtue-theoretic component supplies, further, a cognition that the normative framework taken alone might miss: that in a shared life the excellences are cultivated jointly, and that some of them are excellences of the relation and not only of the parties severally. The patience, the attentiveness, the generosity, and the justice that a good shared life requires are dispositions formed in the parties by the practice of the shared life itself, each party habituated by the relation into the character the relation needs and, in being so habituated, developed; and there are, besides, excellences that belong to the pair, a way of attending to one another, a manner of repair after conflict, a shared bearing toward the world, which are dispositions of the relation, cultivated by its practice and possessed by neither party alone. The classical treatment of such friendship, as a relation in which each wills the good of the other for the other's sake and in which the friends are a condition of one another's flourishing, is Aristotle's [3]. The cognition that flourishing is activity in accordance with cultivated excellence thus carries, for a shared life, the recognition that the relation is a principal medium of the parties' development and the bearer of excellences of its own, and that to cognise the flourishing of a shared life is to cognise the excellences, of each party and of the pair, that the life is to cultivate. This recognition is what the moment of practice will take up, under the constraint that the cultivation of these excellences must guide and not legislate the relation's habit-forming dynamics (§9).

8.3 The phenomenological component: flourishing as lived and meant

The phenomenological framework supplies the cognition that flourishing is, before it is anything assessable, lived and understood: given as the felt quality and the apprehended meaning of a shared life, and not in the first instance as a fact about it. This component is a corrective to the other two as much as an addition. It holds that the normative specification of capabilities and the virtue-theoretic account of cultivated excellence, however just, remain abstract until they are referred to the lived texture of a particular shared life, in which alone the flourishing of these two has its concrete sense. The cognition of what flourishing consists in, for a given couple, is finally an interpretation of their shared life from within it, a hermeneutic apprehension of what their flourishing means, and not the application to them of a general specification from without.

The phenomenological component also supplies the cognition that what is apprehended at this moment is in large part unsymbolised. The felt sense of what a good shared life would be, for these two, precedes and exceeds its articulation; the cognition of flourishing is, at its root, the basal apprehension of §5, conducted in a value not yet brought to words. This connects the moment of cognition to the account of appraisal and guards the moment against the supposition that to cognise flourishing is to formulate a definition of it. To cognise flourishing, at this moment, is in the first place to apprehend, in the lived and largely unsymbolised register, what the good of this shared life would be, and only secondarily to articulate it.

8.4 The frameworks in concert and in tension

The three components are drawn upon together, and they do not perfectly agree. The normative framework specifies flourishing as the unfolding of each, abstractly and for any couple; the virtue-theoretic framework locates it in the cultivation of excellence through shared habit; the phenomenological framework refers it to the lived and unsymbolised meaning of a particular life and resists its abstract specification. The tension is productive and is not to be resolved by the dominance of one component. The normative specification without the phenomenological reference is empty, a general account not yet referred to any actual life; the phenomenological apprehension without the normative specification is mute, a felt sense not yet articulated into anything that could guide practice or be assessed; and both without the virtue-theoretic component float free of the habituation through which alone a flourishing is brought into being. The cognition of flourishing is adequate when the three are held together, the normative specifying what is to be valued, the phenomenological referring it to the lived meaning of this life, and the virtue-theoretic binding it to the cultivation through which it is pursued.

8.5 The normative specification of a just flourishing

The moment of cognition closes by stating, for use in the paper's later evaluation, the specification of a just flourishing toward which the cognition tends. The specification gathers the cognition of this moment with the results of the prior paper.

The normative specification of a just flourishing. A shared life flourishes justly when its cycle of value satisfies the following, jointly. The value generated in the shared life circulates and returns to those who generate it, no party being reduced to a source of value from which it is extracted without return. The unfolding of each party's own dynamics is sustained, neither party's development being foreclosed for the sake of the other's or of the relation's. And the cycle is sustained as a living and open movement, its value neither settled into a possessed condition nor cashed into a closed account, but generated anew in the turning. The first is the condition of justice, carried from the prior paper's account of generative justice and the return to the creator. The second is the eudaimonic condition, the unfolding of each. The third is the condition of the cycle's life, its sustenance as an open spiral rather than a closed repetition. A flourishing that meets the eudaimonic condition while failing the just is not a diminished flourishing but, as the prior paper established, no eudaimonia at all, the development of one purchased by the foreclosure of another. The three conditions are therefore not a list of desiderata to be traded against one another but the joint specification of a single thing, a just eudaimonia, and they furnish the normative basis against which the paper's later evaluation is conducted.

This specification is the product of the moment of cognition, and it is the standard the moment of evaluation will require. It is stated normatively, as what ought to be valued, and not yet as anything measured; the passage from this normative specification to an operational assessment, with all the concession that passage requires, is the work of §10. The cycle now turns to the moment at which a flourishing so specified is pursued: the moment of practice.

9. Practice: The Cultivation of Habit and Household

The cycle turns to practice, the cultivation and the action through which a flourishing, cognised in its normative specification, is pursued. The task of this moment is the formation of the shared life such that the just eudaimonia of §8.5 is generated, and the governing constraint, carried from the prior paper, is that this formation is a cultivation and not a construction: the shared grammar of a relation cannot be legislated from a position of possession, but only tended into an openness within which it continues to be jointly reconfigured. Three frameworks are drawn upon at this moment, the virtue-theoretic, the evidential, and the phenomenological, and the moment is organised around the tension between cultivating a disposition and not legislating it.

9.1 The virtue-theoretic component: flourishing as habituation

The virtue-theoretic framework is the framework proper to the moment of practice, because it alone holds that flourishing is brought into being through the formation of disposition by habit. In the Aristotelian account, the excellences in accordance with which a life flourishes are acquired by habituation: one becomes just by doing just acts, temperate by doing temperate

acts, until the disposition is settled into a *hexis*, a stable state of character from which the corresponding action flows without struggle [4]. The practice of a shared flourishing is, on this account, the habituation of the two parties, severally and together, into the dispositions in accordance with which their shared life is good: the formation, by repeated practice, of the settled ways of attending, responding, and caring that constitute a good shared life.

The matter of this habituation is the everyday sensory and habitual fabric the prior paper identified as the matter of the field. A habit of a shared life is formed in the recurrence of concrete practices: a way of taking a meal together, a manner of greeting and parting, an ordering of the common rooms, a rhythm of attention to one another. These recurrences are the *habitus* in the sociological sense, the durable dispositions, inculcated by a form of life, that generate the practices of that form of life and reproduce it [8]; and they are the family manner, the customs and bearing transmitted across a shared life and, in time, across generations. The cultivation of a shared flourishing is conducted in this fabric: not in the formulation of principles for the relation, but in the formation, by recurrence, of the dispositions borne in the concrete texture of the days.

The mechanism by which a disposition forms from a recurrence is worth making explicit, because it governs what the cultivation of a shared life can and cannot do. A practice repeated becomes easier, then expected, then a part of how the shared life is, until at last it is performed without deliberation and felt as natural, the disposition having settled into the *hexis* from which it flows unbidden. This is why the matter of a shared flourishing is the small and recurrent rather than the large and singular: it is not the grand resolution but the repeated practice that forms a disposition, not the declaration of how the two will live but the daily living of it that settles into the family manner they come to have. A couple does not become attentive to one another by resolving to be attentive; they become attentive by attending, in the concrete recurrences of their days, until attention is the disposition from which they act. The cultivation of a shared flourishing works, accordingly, on the recurrences: it tends the daily fabric such that the practices worth settling into dispositions are the ones that in fact recur, and it does so knowing that what recurs will become, in time, what the parties are. This is also why the corruption of a shared life is so often gradual and unremarked, a small unkindness or a small neglect, recurring, settling by the same mechanism into a disposition, until the relation has acquired a character no one resolved upon and each performs without deliberation. The formation of disposition by habituation is neutral as to the disposition formed, and the cultivation of a shared flourishing is the tending of the recurrences such that the dispositions formed are the excellences of §8.2 and not their contraries.

9.2 The constraint: cultivation without legislation

The formation of a shared disposition stands under a constraint that distinguishes cultivation from its corruption. The prior paper established that to possess and modify the generative structure of a relation from a position claimed to be external to it is exploitation in the symbolic register, the appropriation of a jointly generated generativity to a single legislator, who thereby reduces the other from a co-author of the shared life to an object governed by it. Applied to

the formation of habit, this yields the constraint that the cultivation of a shared disposition must guide the relation's own dynamics without legislating its productions: it must tend the conditions under which good habits form and reform themselves jointly, and it must not impose a fixed habit as a rule the other is required to obey.

Cultivation guides the formation of habit; legislation possesses it. The cultivation of a shared habit is the tending of the conditions under which a disposition forms and continues to reform itself in the joint practice of both parties; it guides the relation's own habit-forming dynamics without fixing their product. The legislation of a habit is the imposition, by one party from a position claimed to be external, of a fixed disposition as a rule the other is required to keep; it possesses the relation's habit-forming dynamics and fixes their product. The two are distinguished as the cultivation of a field is distinguished from the construction of a grammar, and as guidance is distinguished from possession in the prior paper's account of symbolic justice. A habit that is cultivated remains jointly authored and open to joint reform, and the disposition it forms is the disposition of both; a habit that is legislated is the disposition the legislator has fixed, and its imposition reduces the other to its object. The formation of a shared disposition is just when it cultivates and unjust when it legislates, and the difference is not in the content of the habit but in whether the habit-forming dynamics is guided or possessed.

This is the central tension of the moment of practice, and it admits of no general procedure for its resolution, since a procedure for forming the right habits, applied from outside the joint practice, would itself be a legislation. The tension is managed, in the manner of the prior paper's practice, subtractively: by the cultivation of the conditions under which good habits arise rather than the imposition of the habits themselves, by the preservation of the other party's capacity to reform a shared habit rather than the fixing of it, and by the recurrent question whether a habit of the shared life is still jointly authored or has hardened into a rule one party keeps and the other imposes. A family manner is well cultivated when it remains the joint and revisable bearing of both, and ill cultivated when it sets into a regime one administers and the other obeys.

9.3 An operational vocabulary for cultivation without legislation

The constraint is stated as a principle, and a foundational treatment owes the subsequent papers an operational vocabulary in which the principle can be applied, since a principle that cannot be brought to bear on the recurring practice of a shared life is of little use to a praxis. This subsection supplies such a vocabulary, under the operational concession: the terms it introduces are operational instruments for the conduct of a practice, and not measurements of the unsymbolised value the practice serves.

The first instrument is a set of signals by which the drift from cultivation toward legislation may

be recognised before it has hardened. The drift is gradual, by the mechanism of habituation (§9.1), and it is therefore most often unremarked; the signals are the marks by which it may be caught. A shared habit is drifting toward legislation when its revision by one party comes to be treated by the other as a transgression rather than as a contribution; when the justification offered for a practice ceases to be a reason the other could weigh and becomes an appeal to how things are done; when one party's deviation from a practice is met with correction rather than with inquiry; when the practices of the shared life are increasingly described by one party in the language of rule, expectation, and obligation rather than in the language of joint preference; and when the question whether a practice still suits both parties is met with the answer that it is the practice, as though its being established were a reason for its continuance. These signals are operational and defeasible, and no one of them is decisive; their accumulation is the operational sign that a habit is hardening from a joint bearing into an administered rule, and that the cultivation has begun to legislate.

The second instrument is a repertoire of subtractive operations, the operations by which a legislating practice is returned toward cultivation. The repertoire is subtractive because the constraint forbids the additive remedy, the imposition of a better rule, which would be a further legislation; what cultivation can do is remove the conditions under which the legislation operates rather than impose a corrected practice. The subtractive operations include the suspension of a hardened practice, its deliberate setting-aside for a season so that the parties may discover whether it is jointly wanted or merely established; the reopening of a foreclosed question, the deliberate return of a settled practice to the status of an open joint preference; the withdrawal of the language of rule, the deliberate redescription of a practice from obligation to preference; and the restoration of the other party's standing to revise, the deliberate cession, by the party who has come to administer a practice, of the authority to do so. These operations do not impose a just practice; they remove the conditions under which an unjust one is maintained, and return the relation's habit-forming dynamics to the joint authorship from which a just practice may, but need not, arise.

The third instrument is the preservation of betrayability, which the prior paper identified as the mark of a relation that has not foreclosed itself. A shared habit preserves betrayability when its continuance remains contingent on the continued joint willing of both parties, so that either could, in principle, decline it, and its continuance is therefore a renewed joint choice rather than a settled fact. A habit that has lost betrayability is one whose continuance no longer depends on being willed, that persists by its mere establishment and would persist against the will of a party who came to decline it; and such a habit, however benign its content, has become a legislation, since it binds independently of joint willing. The preservation of betrayability is the operational form of the cultivation-not-legislation constraint at the level of the individual habit: a practice is cultivated, and not legislated, to the extent that it remains betrayable, that its continuance remains a renewed joint choice and does not harden into a fact that binds without being willed. The maintenance of betrayability across the habits of a shared life is, accordingly, the central operational task of a just practice, and the signals and subtractive operations above are the instruments of its maintenance.

These three instruments, the signals of drift, the subtractive operations, and the preservation of betrayability, compose an operational vocabulary in which the cultivation-not-legislation constraint can be applied to the recurring practice of a shared life. They are offered to the subsequent papers as the operational form of a principle the present paper states, and they stand, like all the paper's operational apparatus, under the concession that they are instruments of a practice and not measurements of the value the practice serves.

9.4 The evidential component: supported practice and its limit

The evidential framework contributes to the moment of practice the resources of evidence-based practice: the body of controlled findings concerning which practices conduce, on average and in studied populations, to the maintenance and the deepening of a shared life. Such findings are a genuine resource. That certain practices of attention, of repair after conflict, of the just division of a shared life's labour, conduce on the evidence to its flourishing is a real gain for practice, that much of this sustaining labour is emotional labour, and is systematically under-recognised as labour, is argued by Hochschild [28] and Folbre [15]; and to disregard it on the ground that each relation is singular would be to discard a public and accumulable knowledge for a private intuition that is frequently mistaken.

The evidential component carries a limit that the operational concession has prepared. Evidence supports a practice by establishing that it produces a measured effect in a studied population; it speaks, therefore, in the register of the structured proxy, and of the average. It cannot establish what the cultivation of this shared life, in its singularity and its unsymbolised texture, requires, and it cannot reach the unsymbolised value in which the relation's good finally consists. The evidential component is thus a resource to be drawn upon and not a sufficient guide: it furnishes supported practices that the cultivation may employ, while the determination of what this shared life requires remains a matter of the joint and largely unsymbolised appraisal of §5, to which the evidence is an input and not a substitute.

9.5 The phenomenological component: the cultivation of attention

The phenomenological framework contributes to practice the cultivation of attention: the formation, as itself a habit, of a quality of attending to the other and to the shared life. The practice of a shared flourishing is not only the formation of dispositions to act but the formation of a disposition to attend, a settled readiness to perceive the other's state, the texture of the shared life, and the small alterations by which a relation rises or declines. This is the practical correlate of the basal appraisal of §5: since the relation is maintained by the continuous appraisal of its state, the cultivation of the quality of that appraisal, the formation of a fine and unbroken attention to the shared life, is among the principal practices of its flourishing. The cultivation of attention is, moreover, the practice least assimilable to legislation, since attention cannot be imposed as a rule but only formed as a disposition, and it is therefore the practice in which the cultivation-not-legislation constraint is most nearly automatic.

9.6 The frameworks in concert

The three components compose the practice of a shared flourishing. The virtue-theoretic framework supplies its form, the formation of disposition by habituation in the concrete fabric of the shared life. The evidential framework supplies supported practices the cultivation may draw upon, within the limit that they are proxies and averages and not the singular requirement of this life. The phenomenological framework supplies the cultivation of attention, the disposition to appraise the shared life finely and without cease. And the whole stands under the constraint that the formation of disposition is a cultivation and not a legislation, a guidance of the relation's own habit-forming dynamics and not the possession of it. The practice so composed generates the value whose circulation the next moment of the cycle assesses; the cycle now turns to the moment of evaluation, at which the question is how a shared life so cultivated is to be assessed, and at what cost to the value the assessment cannot reach.

10. Evaluation: The Appraisal of a Shared Life and Its Cost

The cycle turns to evaluation in its explicit form. The basal appraisal of §5 runs continuously through every moment; the present moment is the deliberate, instrumented assessment undertaken at particular junctures, in which some aspect of the relation is brought to a structured and assessable form. This is the moment at which the operational concession (§2.3) is most consequential, and the moment at which the positivist framework is most directly drawn upon, though, as will appear, every framework has its own evaluative practice and the frameworks do not agree on what evaluation is. The section first sets out the several evaluative practices, then develops, as its principal contribution, a quantitative assessment of the justice of a relation's value cycle.

10.1 The several practices of evaluation

Evaluation is not one practice but several, drawn from the several frameworks, each assessing a different aspect in a different register.

The *biological* appraisal is the continuous interoceptive and affective evaluation of §5.1: the felt registration, beneath reflection, of how the relation stands. It is the most pervasive evaluation and the one conducted in the value nearest the real, and it is at the same time the least communicable and the least accountable, since it is unsymbolised. It is the ground the other evaluations structure, and not a competitor to them.

The *decision-theoretic* appraisal is the belief updating of §5.2: the revision, on the evidence of the lived fabric, of each party's distribution over the state of the relation. It is evaluation in the register of probability rather than verdict, and it carries the recognition that the state assessed is hidden and the assessment therefore irreducibly uncertain.

The *psychological* appraisal is the structured self-report of appraisal theory and its instruments: the assessment of the relation through the parties' reports of their own appraisals, as in the

measurement of relationship satisfaction. It renders the basal appraisal partially communicable by structuring it into reportable form.

The *positivist* evaluation is the measurement proper: the assessment of the relation by validated instruments yielding comparable and accumulable quantities. Its instruments are many, and they measure distinct things. Life-satisfaction and affect scales measure subjective well-being; quality-of-life instruments measure the conditions of a life; relationship-satisfaction and adjustment scales measure the parties' assessment of the relation; eudaimonic and self-determination instruments measure reported growth, autonomy, and the sense of an unfolding life. Representative instruments are, respectively, the satisfaction-with-life and affect scales [13, 68], quality-of-life assessments [71], dyadic-adjustment scales [60], psychological well-being scales [52], and measures grounded in self-determination theory [12, 51]; the eudaimonic turn in this measurement is represented by Seligman [56]. Each is a structured proxy, validated for its reliability and its correlation with other measures, and each is, within its operational limits, a real gain: public, comparable across relations and across time, and accumulable into a body of findings. The positivist evaluation is the developed form of explicit assessment, and the paper neither disparages it nor mistakes it for the appraisal of the real value it proxies.

The *phenomenological* evaluation is the thick description and the hermeneutic assessment of the shared life: the close interpretive characterisation of how a relation stands, conducted in narrative rather than number, and answerable to the lived meaning of the relation rather than to a comparable metric. It is evaluation that resists the structuring the positivist evaluation requires, on the ground that the structuring discards what is to be assessed, and it stands to the positivist evaluation as the interpretation of a text stands to the counting of its words.

These five practices do not agree on what evaluation is, and the disagreement is not to be resolved by the victory of one. They are evaluative phases, in the sense of §2.2: the positivist measures and is silent on what it cannot structure; the phenomenologist interprets and resists the metric; the decision-theorist quantifies uncertainty and the psychologist structures self-report; the biological appraisal grounds them all in a value none of them reaches. A relation is evaluated well when the practices are drawn upon together and none is mistaken for the whole, and most particularly when the structured measures are read as proxies and not as the appraisal of the real.

10.2 The instruments of explicit evaluation: a survey

The positivist evaluation of flourishing and of relationships has produced, over the past half-century, a substantial body of validated instruments, and the cultivation of a shared life that would assess itself explicitly draws upon them. This subsection surveys the principal instruments, classical and contemporary, and then locates them within the framework of the paper, in order to make precise both what they supply and what, by their construction, they cannot reach.

10.2.1 *The principal instruments and what they measure*

The instruments divide by the construct they target. A first family measures *subjective well-being* in the hedonic tradition, which construes well-being as life satisfaction together with the balance of positive over negative affect. The Satisfaction with Life Scale assesses the cognitive, evaluative component with five items [13]; the Positive and Negative Affect Schedule assesses the affective component with twenty [68]; and the tradition is gathered in Kahneman et al. [35]. A second family measures *eudaimonic well-being*, which construes well-being as the realisation of human potentials rather than the balance of feeling. Ryff’s Scales of Psychological Well-Being operationalise this in six dimensions, autonomy, environmental mastery, personal growth, positive relations with others, purpose in life, and self-acceptance, in forms of eighteen, forty-two, and eighty-four items [52, 53]; self-determination theory supplies measures grounded in the satisfaction of the basic needs for autonomy, competence, and relatedness [12, 51]; and the PERMA framework adds engagement, relationships, meaning, and accomplishment to positive emotion [56]. A third family measures *quality of life* through objective and mixed indicators, of which the World Health Organization’s quality-of-life assessment, covering physical, psychological, social, and environmental domains, is representative [71]. A fourth family, central to the present paper, measures *relationship quality*: the Dyadic Adjustment Scale assesses the quality of a couple’s relationship with thirty-two items across consensus, satisfaction, cohesion, and affectional expression [60], while the Relationship Assessment Scale offers a brief, seven-item, unidimensional measure of global relationship satisfaction [25].

Contemporary work has extended this measurement from the individual and the couple to the population and the globe, and from a single index to multidimensional batteries. National and international instruments now assess well-being at the level of whole societies. The World Happiness Report ranks more than one hundred and forty countries on a single life-evaluation question, the Cantril ladder, on which respondents place their lives between the worst (0) and the best (10) possible, averaged over a three-year window from the Gallup World Poll [70]. The OECD’s Better Life Index assesses well-being across eleven dimensions, among them housing, income, jobs, community, education, environment, health, life satisfaction, safety, and work-life balance, drawn from twenty-four indicators and aggregated under user-assigned weights [46]. And the Global Flourishing Study, a longitudinal panel of more than two hundred thousand participants across twenty-two countries, measures flourishing across six domains, happiness and life satisfaction, physical and mental health, meaning and purpose, character and virtue, close social relationships, and financial and material stability [66, 67]. These instruments are summarised in Table 3.

10.2.2 *The instruments within the framework of this paper*

The survey makes possible a precise statement of what the existing instruments supply to the assessment of a shared flourishing and what they do not. Located within the framework of this paper, each instrument proxies some component of the normative specification of §8.5, and the location reveals a systematic gap. The hedonic instruments proxy the felt quality of a life, an aspect of the eudaimonic condition, and they proxy it at the level of the aggregate or the

Table 3: Principal instruments for the quantitative measurement of well-being, quality of life, and relationship quality.

Instrument	Tradition	What it measures	Source
Satisfaction with Life Scale	Hedonic SWB	Cognitive life satisfaction; 5 items, 7-point	Diener et al. [13]
PANAS	Hedonic SWB	Positive and negative affect; 20 items	Watson et al. [68]
Ryff Scales (PWB)	Eudaimonic	Six dimensions of positive functioning; 18–84 items	Ryff [52], Ryff and Keyes [53]
Self-determination measures	Eudaimonic	Autonomy, competence, relatedness need-satisfaction	Ryan and Deci [51]
PERMA	Eudaimonic	Positive emotion, engagement, relationships, meaning, accomplishment	Seligman [56]
WHOQOL	Quality of life	Physical, psychological, social, environmental domains	WHOQOL Group [71]
Dyadic Adjustment Scale	Relationship	Consensus, satisfaction, cohesion, affection; 32 items	Spanier [60]
Relationship Assessment Scale	Relationship	Global relationship satisfaction; 7 items, unidimensional	Hendrick [25]
World Happiness Report	Macro/national	Single life-evaluation (Cantril ladder); national averages	Wellbeing Research Centre [70]
OECD Better Life Index	Macro/national	Eleven dimensions, 24 indicators, user-weighted	OECD [46]
Global Flourishing Study	Eudaimonic/macro	Six domains incl. character, meaning, relationships; longitudinal	VanderWeele et al. [67]

mean, which is exactly the level at which the maldistribution of return is invisible (§10.3.3). The eudaimonic instruments proxy the unfolding of each party’s potentials, and so come nearest the eudaimonic condition of the unfolding of each, but they measure the individual’s functioning in isolation and do not assess whether one party’s unfolding is purchased by another’s foreclosure. The relationship instruments proxy the parties’ satisfaction with the relation, again at the level of each party’s report, and a relation may score well on them while distributing its returns unjustly, since a favoured party’s high satisfaction and an habituated party’s adjusted satisfaction together yield an unremarkable aggregate. The macro instruments proxy well-being at the level of populations and are not addressed to the internal justice of a particular shared life at all.

The systematic gap is the condition of justice. No instrument in the survey measures whether the value a party generates returns to that party, nor whether one party is consigned to the low-return tail of §10.3.3; the instruments measure satisfaction, functioning, and conditions, each at the level of the party or the aggregate, and the distribution of return among the parties, relative to their coupling, is not among the constructs they target. This is not a defect of the instruments within their own traditions but a boundary of those traditions, and it is the boundary at which the paper’s quantitative assessment of justice (§10.3) is directed. Table 4

Table 4: The instruments located within the framework of the paper: the component of a just eudaimonia each proxies, the moment of the cycle at which each is drawn upon, and whether it registers the condition of justice.

Family	Component of a just eudaimonia proxied	Cycle moment	Registers justice?
Hedonic SWB	Felt quality of life, at the aggregate or mean	Evaluation	No; mean conceals skew
Eudaimonic	Unfolding of each party's potentials, in isolation	Cognition, evaluation	Partially; misses foreclosure by the other
Relationship quality	Each party's satisfaction with the relation	Evaluation, reflection	No; aggregate conceals maldistribution
Quality of life	Objective conditions of a life	Practice, evaluation	No; not addressed to return
Macro/national	Population-level well-being	(Not intra-relational)	No; not addressed to a particular relation
Skew of return <i>(this paper)</i>	Justice: return to each relative to coupling	Evaluation, reflection	Yes; this is its object

locates the instruments within the framework, by the component of a just eudaimonia each proxies and by the moment of the cycle at which each is principally drawn upon, and it records, in its final column, that the condition of justice is the one no existing family of instruments supplies.

The two tables together state the contribution of the paper's quantitative assessment against the background of the existing instruments. The existing instruments, classical and contemporary, measure satisfaction, functioning, conditions, and their population aggregates, and they do so with a validity and an accumulability the paper does not match and does not attempt to match. What they do not measure, by the construction of the constructs they target, is the distribution of return among the parties of a relation, and so the condition of justice that the prior paper held to be constitutive of eudaimonia. The skew of the return distribution is offered as the structured proxy for exactly this gap: not a replacement for the existing instruments, but an addition orthogonal to them, addressed to the one component of a just eudaimonia that the survey shows no existing family of instruments to register.

10.3 The quantitative assessment of justice

The paper now develops, as the principal contribution of this moment, a quantitative assessment directed at the condition of justice in the normative specification of §8.5. The condition of justice is that the value generated in the shared life circulates and returns to those who generate it, no party being reduced to a source from which value is extracted without return. The assess-

ment of this condition admits of a structured proxy that makes visible a feature the satisfaction measures cannot, the systematic maldistribution of return that constitutes exploitation within an apparently satisfying relation. The assessment is offered under the operational concession throughout: it is a structured proxy for the justice of a relation's value cycle, operationally valuable and not a measurement of the relation's real worth.

10.3.1 Expected recyclability

The first quantity is the expected recyclability of value in the relation: the probability that a value generated by one party is met, within the relation, by a response that regenerates value in turn, rather than being absorbed without return. A contribution to a shared life, an act of care, an effort of attention, a piece of the relation's sustaining labour, may be met in one of three ways. It may be met by a response that itself generates value, an acknowledgement, a reciprocation, a deepening, so that the contribution sets a further turn of the cycle in motion; this is the recyclable case. It may be met by a response that neither regenerates nor depletes, a neutral absorption in which the contribution is received and nothing further follows; this is the lossy case. Or it may be met by a response that depletes, a contribution received and answered with a withdrawal or a demand for more, so that the act of giving leaves the giver with less than before; this is the extractive case. The expected recyclability is the probability, characteristic of the relation, that a contribution falls into the first case rather than the second or the third.

So defined, recyclability is the proxy proper to the condition of the cycle's life. A cycle sustains itself when the value it regenerates, turn upon turn, at least balances the value it loses to neutral absorption and extractive response; and whether it does so is governed by the recyclability. There is a threshold: above a critical recyclability, contributions regenerate faster than they are lost, and the cycle of value is self-sustaining or growing; below it, contributions are lost faster than they regenerate, and the cycle winds down, its sustaining labour meeting diminishing response until the parties cease to contribute and the relation decays toward the extinction of §13. The condition is recognisable in its phenomenology. A relation of high recyclability is one in which giving feels generative, in which an effort made is met by a response that makes further effort worth making; a relation of low recyclability is one in which giving feels thankless, in which contributions disappear into a partner who receives without regenerating, and in which the giver, over time, contributes less because the contributions return nothing. The decline of recyclability below its threshold is the quantitative form of a relation's running down, and it is to be distinguished, as the next quantities require, from the maldistribution of return among the parties, which a relation of adequate aggregate recyclability may still exhibit.

10.3.2 Return relative to a coupling-based baseline

The second quantity concerns the distribution of return among the parties, assessed against a baseline set by the coupling of the relation. The intuition the quantity formalises is that the degree of return that is just is not fixed but depends on how deeply the parties are coupled. Coupling, here, is the degree to which the parties' goods are bound together, the extent to

which what benefits one benefits the other and what the relation generates is held in common rather than apportioned. In a loosely coupled relation, say an association of convenience, the parties' goods are largely separate, and a contribution by one may justly yield most of its return outside the relation, to the contributor's separate good; little is owed back through the relation, because little was staked in common. In a deeply coupled relation, a shared life fully joined, the parties' goods are bound together, and a contribution by one is made into a common store from which return is owed back to its generator through the relation; much is owed back, because much was staked in common. The coupling thus sets a baseline expected return: the share of the value a party generates that, given the depth of the coupling, ought to circulate within the relation and return to that party rather than be absorbed elsewhere.

The baseline is what makes the assessment of return a normative and not merely a descriptive matter. To observe that a party's contributions return little to that party is not yet to find an injustice, for in a loosely coupled relation little return is owed. The injustice is the shortfall of actual return below the baseline the coupling sets: a party in a deeply coupled relation, who has staked a shared life in common and whose contributions therefore ought to return to that party through the relation, but whose actual return falls systematically below that baseline, is a party from whom value is extracted under the very depth of coupling that ought to have returned it. This is the characteristic structure of exploitation within intimacy, and it is invisible to an assessment that does not set the baseline by the coupling: the deeply coupled party who is under-returned has given most and is owed most, and it is precisely the depth of the coupling, read without the baseline, that can be made to look like generosity freely given rather than value unjustly retained. The assessment compares the actual return to each party against the coupling-based baseline, and reads a systematic shortfall as extraction.

10.3.3 Skewness as the statistical fingerprint of injustice

The third quantity is the principal instrument of the assessment. Consider the distribution, across the parties and across time, of value returned relative to value generated. In a just relation, this distribution is, relative to the coupling-based baseline, approximately symmetric: returns are distributed among the generators in proportion to their generation, and no generator is systematically consigned to the low-return tail. In an exploitative relation, the distribution is skewed: value returns disproportionately to one party, while another party, characteristically the party who bears the larger share of the relation's sustaining labour, generates value that is systematically under-returned and is consigned to the tail of the distribution.

Skewness of the return distribution as the statistical fingerprint of injustice. The injustice of a relation's value cycle has a statistical signature in the skewness of the distribution of returned value relative to the coupling-based baseline. A just cycle returns value to its generators in proportion to their generation and to the coupling, yielding a distribution that is approximately symmetric about the baseline. An exploitative cycle returns value disproportionately to one party and consigns another systematically to the low-return tail, yielding

a distribution skewed away from the under-returned party. The skewness of the return distribution is therefore a structured proxy for the injustice of the cycle, and it makes visible a maldistribution that aggregate measures of satisfaction conceal: a relation may exhibit high mean satisfaction while its return distribution is severely skewed, the high mean being the satisfaction of the over-returned party and the skew the signature of the other's exploitation. The skewness is read, under the operational concession, as a proxy for injustice and not as its measurement; a symmetric distribution is necessary but not sufficient for justice, and a skewed one is evidence of, and not identical to, exploitation.

The skewness measure has the methodological merit of being orthogonal to the satisfaction measures, and so of detecting what they systematically miss. An aggregate or mean measure of relational satisfaction is raised by the satisfaction of the over-returned party and is insensitive to the maldistribution beneath it; a relation can score well on mean satisfaction precisely because the party it favours is well satisfied, while the party it exploits is consigned to the tail. The skewness reads the shape of the distribution rather than its mean, and so detects the maldistribution the mean conceals. This is the formal counterpart, in the assessment of a relation, of the prior paper's thesis that a satisfaction purchased by the foreclosure of another is no eudaimonia: the mean satisfaction is high, and the relation is nonetheless unjust, and the injustice is legible in the skew.

The mechanism by which one party comes to occupy the low-return tail deserves to be made concrete, because it is the recurring structure the measure is designed to detect. A relation distributes, among other things, its sustaining labour: the work of attention, of care, of maintaining the household and the relationship itself, the emotional and reproductive labour without which the shared life does not continue. The systematic under-recognition of this labour as labour, and its uncompensated extraction, is documented by Hochschild [28] and analysed in the economics of care by Folbre [15]. This labour generates value, much of it, since the shared life it sustains is the medium of the relation's whole flourishing. When this labour is borne disproportionately by one party, and when the value it generates returns disproportionately to the other, the bearer of the sustaining labour is the party consigned to the tail: she generates a large share of the relation's value and receives a small share of its return, and the gap is the measure of her exploitation. The structure is the more durable for being concealed by its own ideology, in which the sustaining labour is figured as freely given, as natural to the one who bears it, or as no labour at all, so that its under-return is read not as extraction but as the order of things. The skewness measure is constructed to make this structure legible against that concealment: it does not ask whether the bearer of the labour reports satisfaction, which she may, having been habituated to expect no return, but whether the value she generates returns to her, which, in the exploitative case, it does not.

A contrast makes the orthogonality to the mean vivid. Consider two relations that score identically on a measure of mean satisfaction. In the first, both parties contribute to the

sustaining labour, the value each generates returns to each in proportion to the coupling, and the return distribution is approximately symmetric; the shared mean satisfaction is the mark of a flourishing that both enjoy. In the second, one party bears almost all the sustaining labour and receives little return, while the other receives most of the relation's value and bears little of its cost; the over-returned party is highly satisfied, the under-returned party reports a satisfaction depressed but not absent, having adjusted her expectations to her position, and the mean of the two is, by construction, equal to the mean of the first relation. The mean satisfaction does not distinguish these relations; the skewness does. The first has a symmetric return distribution and the second a severely skewed one, and the skew of the second is the signature of an exploitation that the equal means conceal. The measure earns its place exactly here: it sees, in two relations a satisfaction survey would rank together, the difference between a flourishing both parties share and a flourishing one party extracts from the other.

10.3.4 A model for the test, and a hypothesis

The skewness measure presupposes a model, since a distribution of return cannot be assessed for its skewness without a model of how return is generated, against which the observed distribution is compared. The paper indicates the form of the required model without claiming to have validated it, in keeping with the concession. The relation is represented as a network whose nodes are the generators, the two parties and the coupled others, characteristically family, whose value the relation also circulates, and whose edges carry the couplings, the weighted channels along which value propagates from one generator to another. Value generated at a node does not remain there; it propagates along the edges, a portion returning to its origin, a portion passing to coupled others, a portion lost from the network altogether. The propagation is modelled as a branching process on this network, in the manner of the prior series' formalisation of generative recursion: the mathematics of such propagation, in which quantities at nodes generate quantities at successors and the probability of eventual return is the object of interest, is the classical theory of branching processes [23]; value at a node produces, in expectation, value at adjacent nodes in proportion to the edge weights, each such product producing further value in turn, and the expected return to a generator is the probability, accumulated over all the paths by which value may travel and return, that value originating at that generator's node finds its way back to it. The coupling of the relation enters twice, as the topology of the network, which generators are joined to which, and as the weights on the edges, how strongly; and together these fix, for each generator, the coupling-based baseline of §10.3.2, the expected return that the coupling structure would yield were propagation unbiased, neither favouring nor disfavouring any generator beyond what the couplings themselves dictate.

On such a model a hypothesis test becomes storable, and its terms can be given exactly. Let the normalised return to a generator be its actual expected return divided by its coupling-based baseline, so that a value of one is the return the coupling alone would yield, a value above one a generator favoured beyond its coupling, and a value below one a generator disfavoured below it. The null hypothesis is that return is unbiased: that the normalised return is, in expectation, equal across generators, so that the distribution of normalised return is symmetric about its

centre and no generator is systematically favoured or disfavoured beyond the coupling. The alternative is that return is systematically biased: that some generator, characteristically the bearer of the sustaining labour, has a normalised return whose expectation lies significantly below the others, so that the distribution is significantly skewed against that generator. The test statistic is the skewness of the observed distribution of normalised return, and the test asks whether an observed skew lies within the range compatible with the null of unbiased propagation or is large enough to reject it in favour of systematic extraction. The paper advances the form of this test, and not a validated instrument. The model requires assumptions that have not here been discharged, on the propagation probabilities, on the independence of the branching, and on the stationarity of the couplings over the period of estimation; the estimation of returns in an actual relation, the assignment of value to acts of care and its tracing through the network, is a substantial empirical problem the paper does not solve; and the result, were it obtained, would be a structured proxy for injustice under the concession, evidence of extraction and not its measurement. The contribution is the form: that the justice of a relation's value cycle is, in principle and under the concession, a testable hypothesis about the skewness of a return distribution against a coupling-based baseline, and not a matter on which only impression can be brought to bear.

10.4 The operationalisation of return, and a worked illustration

The assessment of justice requires that the abstract notion of the return of value be operationalised into a quantity that could, in principle, be estimated; this subsection sets out the operationalisation and illustrates it on a deliberately simple example, under the operational concession throughout.

The operationalisation proceeds in four steps. First, the contributions of each party over a period are identified: the discrete acts of generation, the pieces of sustaining labour, the cared-for occasions, that each party contributes to the shared life. Second, to each contribution is assigned a value, in a common unit, proxying the value it generates for the shared life; the assignment is the most contestable step, and the concession applies most stringently here, since the value of an act of care is exactly the unsymbolised quantity the proxy cannot reach, and the assignment is an operational stipulation and not a measurement. Third, for each party the return is identified: of the value generated in the shared life, the portion that returns to that party, whether directly or through the relation's circulation. Fourth, the return to each party is normalised by the coupling-based baseline of §10.3.2, the return the coupling structure would yield under unbiased propagation, to give the normalised return on which the assessment of skewness is conducted.

A worked illustration, with stipulated numbers, shows the quantities in operation; the numbers are illustrative and carry no empirical claim. Consider a deeply coupled relation of two parties, *A* and *B*, over a period in which the shared life generates value, in the common unit, of 100. Suppose *B* bears the larger share of the sustaining labour and generates 60 of this value, while *A* generates 40. In a just cycle, given the depth of the coupling, the return to each would be approximately proportional to generation: *B* would receive a return near 60 and *A* a return

near 40, the normalised returns of both being near 1, and the distribution of normalised return approximately symmetric. Suppose instead that the relation returns value disproportionately to *A*: of the 100 generated, *A* receives a return of 65 and *B* a return of 35. The normalised return to *A* is then $65/40 \approx 1.6$ and to *B* is $35/60 \approx 0.58$. The distribution of normalised return is now skewed: *A* sits well above the baseline of 1, and *B* well below it, in the low-return tail. The skewness of the normalised-return distribution, negative for *B*, is the statistical fingerprint of §10.3.3, and it is legible here despite the relation's possibly high mean satisfaction, since *A*, the over-returned party, may report great contentment, and *B*, habituated to bearing the sustaining labour for little return, may report a satisfaction only moderately depressed, so that the mean of the two is unremarkable while the skew is severe. The illustration shows the quantities the assessment computes; it does not show that they can be estimated easily in an actual relation, which, as §10.3.4 stated, remains a substantial empirical problem the paper does not solve.

10.5 The evaluation of the unfolding of each

The condition of justice admits the structured proxy just developed. The eudaimonic condition, the unfolding of each party's own dynamics, is the most resistant to structuring, because it lies nearest the unsymbolised value the proxy cannot reach, and the paper records its resistance rather than overcoming it. Two proxies are nonetheless available and worth stating, under the concession.

The first is the rate at which each party's intended undertakings are in fact accomplished: the proportion of what a party sets out to be and to do that the party, within the shared life, achieves. The intended undertakings of a party are the projects, the developments, the becomings that party has reason to value and sets out upon, the unfolding of that party's own dynamics in concrete form: a body of work, a craft, a friendship, a course of study, a way of living the party means to grow into. The proxy tracks, over time, what proportion of these a party accomplishes rather than abandons. A shared life that sustains the unfolding of each is one in which each party's intended undertakings are, over time, accomplished at a rate that does not systematically decline, the relation making room for and conducting to the development each sets out upon; a shared life that forecloses one party's unfolding is one in which that party's intended undertakings are systematically unaccomplished, the development that party set out upon stalling and then ceasing to be attempted. The rate of accomplishment is a coarse proxy, since not every intended undertaking ought to be accomplished and not every abandonment is a foreclosure, but a systematic decline in one party's rate, sustained over the seasons of a shared life, is a structured signature of a unfolding being foreclosed.

The second proxy refines the first by attributing the shortfall, and it is the more telling of the two. Of a party's intended undertakings that are not accomplished, the assessment distinguishes those not accomplished for reasons extraneous to the relation, the ordinary attrition of projects that any life suffers, from those not accomplished because the shared life foreclosed them: the undertakings a party set aside, deferred, or abandoned on account of the relation, because the relation's demands left no room for them, because the sustaining labour the party bore

consumed the time and the energy they required, or because the party's development was tacitly understood, by both parties, to be the one that would yield. It is this attributed shortfall, and not the gross rate of abandonment, that proxies foreclosure. A party may accomplish few of their intended undertakings for reasons that have nothing to do with the relation, and a relation is not thereby indicted; but a party who systematically abandons their undertakings on account of the relation, while the other party's undertakings proceed, is a party whose unfolding the relation is foreclosing in favour of the other's. A systematically high proportion of intended undertakings foreclosed on account of the relation, concentrated in one party, is the proxy for the foreclosure of that party's unfolding, and it couples directly to the assessment of justice. The party whose unfolding the relation forecloses is characteristically the party consigned to the low-return tail of §10.3.3, for the same sustaining labour that returns little value to its bearer is what consumes the room her own undertakings would have required; the two proxies, the skew of return and the concentration of foreclosed undertakings, are two structured signatures of one exploitation, read in the register of value returned and in the register of development foreclosed.

The foreclosure of unfolding as a proxy coupled to the skew of return. The foreclosure of a party's unfolding admits a structured proxy in the proportion of that party's intended undertakings that are abandoned on account of the relation, and this proxy is coupled to the skew of the return distribution. The party whose unfolding the relation forecloses is characteristically the party from whom value is extracted without return, so that a concentration of foreclosed undertakings in one party and a skew of the return distribution against the same party are two signatures of a single injustice, the reduction of that party to the sustaining fuel of a relation that returns to it neither value nor the freedom to unfold. The proxies are read under the concession, as structured signatures of an exploitation they evidence and do not measure, and they leave the unsymbolised remainder of each party's unfolding beyond their reach.

10.6 The poetic condition, and the limit of evaluation

The third condition of the normative specification, that the cycle be sustained as a living and open movement rather than settled into a closed repetition, is the least amenable to structuring, and the paper records only the direction a proxy would take. The condition is that the relation's recurrences, its habits, its shared signs, its rituals, continue to accumulate an irreducible remainder on each traversal, the positive holonomy of the prior paper, rather than emptying into a repetition that returns nothing new. A proxy would assess whether the relation's recurrences are generative, whether a shared practice traversed again yields something not contained in its prior traversals, or have become a closed repetition traversed without gain. The paper does not develop a measure of this, and holds that it is at best semi-quantitative,

since the accumulation of an irreducible remainder is close to the unsymbolised value that no structuring reaches. The poetic condition marks the limit at which the evaluation of a shared life passes beyond the structured proxy and returns to the basal and unsymbolised appraisal from which it was abstracted.

10.7 The standing of the whole evaluation

The evaluation developed in this section, in all its practices and proxies, stands under the operational concession, and the concession is to be restated as the section closes, because the next moment of the cycle, reflection, turns precisely on it. Every structured measure of this section, the satisfaction scales, the recyclability, the skew of return, the rate and attribution of accomplished undertakings, is a structured proxy for a value it does not reach, operationally valuable and incomplete. The measures are public where the basal appraisal is private, comparable where it is singular, accumulable where it is evanescent, and these are real gains that warrant the measures' use. The measures are, at the same time, structured symbolisations of an appraisal whose object is unsymbolised, and they discard exactly the remainder in which the relation's real value consists. To use them is to accept this exchange knowingly, for the operational gain it brings; to mistake them for the appraisal of the real value is the error the next moment of the cycle, reflection, exists to correct.

11. Reflection: The Re-examination of the Evaluation

The cycle turns to reflection, the re-examination of the evaluation and of the cognition that framed it. The task of this moment is to hold the structured results of evaluation against the value they proxy and do not reach, and so to prevent the structured measure from being mistaken for the appraisal of the real. The moment draws upon the normative and the virtue-theoretic frameworks, which return here to reassert what the measures cannot contain, and upon the phenomenological framework, which reasserts the lived meaning the structuring discarded. It is the moment at which the operational concession is most stringently enforced, and the moment that prevents the evaluation of §10 from hardening into a possessed truth about the relation.

11.1 The blindness of the measures, and forged flourishing

The first work of reflection is to recall what the measures cannot register. A high score on a satisfaction scale is compatible with a relation that is unjust, since the mean satisfaction is raised by the contentment of a favoured party and is insensitive to the maldistribution beneath it (§10.3.3); it is compatible with a relation that forecloses one party's unfolding, since the foreclosed party may report satisfaction with a life it has been habituated to expect nothing more from; and it is compatible with a relation whose cycle has settled into a closed repetition that returns nothing new, since the comfort of the familiar registers as satisfaction. A relation may, in short, score well and be a forged flourishing: a satisfaction that has the measurable marks of the good without its reality, in the manner the prior paper analysed as the forged holonomy, the closed cycle that wears the appearance of the spiral.

Measured satisfaction is compatible with forged flourishing. A high measured satisfaction is necessary neither for nor sufficient for a just eudaimonia. It is compatible with injustice, since an aggregate measure is insensitive to the skew of return; with the foreclosure of a party's unfolding, since a foreclosed party may report contentment with a diminished expectation; and with a closed and depleting repetition, since familiarity registers as satisfaction. The measured satisfaction is therefore a structured proxy that a forged flourishing can satisfy, and the work of reflection is to read the measures against the conditions they cannot register, the skew of return, the foreclosure of unfolding, and the closure of the cycle, and so to distinguish a measured satisfaction that marks a real flourishing from one that marks a forged one.

This is the point at which the orthogonal instruments of §10 earn their place. The satisfaction measure alone cannot distinguish the real flourishing from the forged, since both score well on it. The skew of return and the concentration of foreclosed undertakings can distinguish them, since the forged flourishing, however high its mean satisfaction, exhibits the skew and the foreclosure that the real flourishing does not. Reflection is the moment at which the satisfaction measure is read against these orthogonal proxies, and a high satisfaction accompanied by a severe skew is recognised for what it is, the contentment of the favoured party in an unjust relation.

11.2 The return of the question of justice

The second work of reflection is to reassert the question of justice, which the aggregate measures structurally suppress. An evaluation conducted in means and totals asks how satisfying the relation is, and does not ask to whom its satisfactions accrue and at whose cost. Reflection reasserts the second question. It reads the skew of the return distribution as evidence of who is consigned to the low-return tail; it reads the concentration of foreclosed undertakings as evidence of whose unfolding the relation forecloses; and it identifies, where these signatures coincide, the party reduced to the sustaining fuel of the relation, the party who generates value that does not return and whose own unfolding is set aside on account of a shared life that returns to it neither. The question of justice is the question the prior paper held to be constitutive of eudaimonia rather than additional to it, and reflection is the moment at which it is brought to bear on the results of evaluation, against the tendency of the aggregate measures to suppress it.

11.3 The evaluation may not be possessed as the truth of the relation

The third work of reflection is the most consequential, and it is the point at which the operational concession bears most stringently. The structured evaluation of a relation, once conducted, presents a standing temptation: to be taken as the truth of the relation, the authoritative account of how things stand, against which the parties' own appraisals are to be corrected. To yield to this temptation is to commit, in the register of evaluation, the error the

prior paper identified as the cardinal one.

The evaluation may not be possessed as the truth of the relation. The structured evaluation of a relation is an operationally warranted proxy, and it may not be possessed as the truth of the relation. To take the measure as the truth, as the authoritative account against which the parties' own appraisals are to be corrected, is to install the evaluation in the place of the barred Other: to treat a structured proxy as the standpoint from which the real value of the relation is known, which is the standpoint the series has established does not exist. The error repeats, in the register of evaluation, the cardinal error of the prior paper, the private certainty of one's own goodness, now as the certainty conferred by a measure; and it is the same occupation of the place of the Other, the same settling of an open and unsymbolised appraisal into a possessed and closed determination. The authority of the evaluation is operational, defeasible, and answerable to the basal appraisal it proxies; it is an instrument of the relation's continued appraisal of itself, and not a verdict upon the relation delivered from outside it. The measure is to be used and not believed, consulted and not obeyed, held as a proxy and never possessed as the truth.

This is the deepest cut of the operational concession. The concession permitted the structured measure, for its operational gain, on the understanding that it is a proxy for a value it does not reach. Reflection enforces the understanding by refusing the measure the authority of truth: the moment the evaluation is possessed as the truth of the relation, the concession is broken, and the proxy that was admitted as an instrument becomes a new metalanguage, a structured idol installed in the place the series has kept empty. The measure that said a relation was well is not the relation's being well, and the measure that said it was ill is not the relation's being ill; both are proxies, to be weighed in the continued appraisal that no measure concludes. Reflection keeps the place of the Other empty against the measure's claim to fill it, and so returns the evaluation to its standing as an instrument of a self-appraisal that remains, in the end, unsymbolised and unconcluded.

11.4 Reflection as the safeguard of the cycle

The three works of reflection together safeguard the cycle against the characteristic failures of its evaluative moment. Reading the measures against forged flourishing safeguards against the complacency of a high score; reasserting the question of justice safeguards against the suppression of cost by aggregate; and refusing the measure the authority of truth safeguards against the installation of a structured idol in the place of the real. Reflection is, in this respect, the moment at which the cycle protects itself from its own instruments, and it prepares the moment of re-cognition by returning, corrected and chastened, to the cognition with which the cycle began. The relation that has reflected does not carry forward its measures as truths; it

carries forward a revised and re-opened appraisal, in which the measures have been weighed and found to be proxies, and the question of how things really stand between the two has been returned to the unsymbolised register in which it is finally settled, and never finally settled. The cycle now turns to re-cognition, in which this revised appraisal becomes the cognition of a further turn.

12. Re-cognition: The Closing and Reopening of the Turn

The cycle turns to re-cognition, the moment at which the revised and reopened appraisal carried out of reflection becomes the cognition with which a further turn begins. The task of this moment is the least like a discrete operation and the most like a passage: it is the carrying forward of what the turn has accumulated into the cognition of the next, and it is the point at which the lifecycle is seen to be a spiral rather than a circle. The moment is brief to state and consequential in what it establishes about the cycle as a whole.

12.1 Re-cognition is not a return to the initial cognition

The cognition with which a turn of the cycle ends is not the cognition with which it began. The turn has passed through practice, through the evaluation of what the practice generated, and through the reflection that read the evaluation against the value it could not reach; and the cognition that emerges carries the accumulated difference. What the parties take their flourishing to consist in, at the close of a turn, has been altered by the turn: deepened where the turn ascended, narrowed where it declined, and in either case not identical to the cognition that opened it. Re-cognition is this altered cognition, and the lifecycle is therefore not a circle that returns to its starting point but a spiral that returns to the starting configuration bearing the phase the turn accumulated.

Re-cognition carries the holonomy of the turn. The cognition with which a turn of the cycle closes differs from the cognition with which it opened by the phase the turn has accumulated, and re-cognition is the carrying of this difference into the next turn. The lifecycle is accordingly a spiral and not a circle: it returns to the moment of cognition, but to a cognition altered by the turn, and the accumulated alteration over many turns is the long ascent or the long decline of a shared life. A turn that ascends returns a deepened cognition of the good, enriched by what the turn generated and corrected by what reflection found; a turn that declines returns a narrowed cognition, impoverished by what the turn depleted; and a turn traversed without ascent or decline returns the cognition unchanged, the closed circle of a repetition that goes round without rising. Re-cognition is the moment at which the phase of the turn is registered in the cognition of the next, and through which the holonomy of the lifecycle accumulates across the history of a relation.

12.2 The accumulation across the time of a relation

The registration of each turn's phase in the cognition of the next is the mechanism by which a shared life rises or declines across its history. A relation is many nested turns (§6.3), and the re-cognition that closes each turn sets the cognition of the next, so that the phases compound: a relation whose turns severally ascend compounds its ascent, its cognition of the good deepening turn upon turn, its practice enriching, its parties developing through the shared life into more than they were; a relation whose turns severally decline compounds its decline, however intact its outward form. The passage from courtship through marriage into the later years is, on this account, the compounding of the phases of its turns, and the difference between a shared life that has flourished across its arc and one that has declined across it is the accumulated holonomy of its many turns, registered at each re-cognition and carried into each successive cognition.

This is the point at which the lifecycle's relation to the time of a real shared life is most concrete. The marriage at which a relation arrives is not the completion of the cycle but a re-cognition of unusual depth, a turn at which the cognition of the good is reconceived under the altered conditions of a life now formally and practically joined; and the later years are the compounding of the turns that follow it. The cognition of flourishing is, across this arc, never fixed and never finally attained, but reconceived at each re-cognition in the light of what the prior turns have made of the parties and of their shared life. The good of a shared life is, in this respect, not a destination the cycle approaches but the very substance of its turning, generated and reconceived at each turn and accumulated, for better or worse, across them all.

12.3 The openness of the spiral

The spiral does not close. Re-cognition opens a further turn, and there is no final re-cognition at which the cognition of the good is fixed once and for all and the cycle comes to rest in a completed understanding. To suppose such a final re-cognition would be to suppose a state of achieved and possessed flourishing, the closed circle of a cognition that no longer revises, which is, by the argument of §6.2, not the completion of the relation but its cessation. The good of a shared life is unguaranteeable and processual, in the sense the prior paper established, and its cognition is correspondingly unfinished: reconceived at each turn, never possessed as a final understanding, and carried forward into a further turn that the cycle, so long as the relation lives, continues to open. Re-cognition is therefore not the cycle's conclusion but its renewal, and the lifecycle, considered as a whole, is an open spiral that the relation sustains by continuing to turn. The paper now considers this whole, in the three regimes its turning may assume.

13. The Good, the Catastrophic, and the Extinguished Cycle

The paper has traversed the moments of a single turn. It now considers the cycle as a whole, in the regimes its turning may assume across the history of a relation. Three regimes are distinguished, by the conjunction of two questions: whether the cycle persists, and, if it persists,

what sign of phase it accumulates. The two questions are not of the same order. The first concerns the existence of the relation, the second its character; and the regimes they jointly define are the flourishing spiral, the catastrophic cycle, and extinction.

13.1 Persistence and phase as two questions

The dynamical vocabulary of §4 distinguishes two features of a cyclic system that bear on a relation. The first is whether the system sustains its cyclic movement at all, or decays toward the terminal rest of a fixed point. The second, for a system that does sustain its movement, is the phase it accumulates around a turn, positive, vanishing, or negative. These are independent: a cycle may persist with a positive phase, persist with a negative phase, or fail to persist; and the three regimes of a relation are the three outcomes of this pair of questions, the fourth combination, a non-persisting cycle with a phase, being empty, since a cycle that does not persist accumulates no phase.

Three regimes from two questions. The regime of a relation is fixed by two independent questions: whether its cycle persists, and, if it persists, what sign of phase it accumulates over a turn. A persisting cycle of positive phase is a flourishing spiral, which ascends as it turns. A persisting cycle of negative phase is a catastrophic cycle, which persists while depleting, descending as it turns. A cycle that does not persist is extinction, the decay of the relation's movement toward the terminal rest in which value is no longer generated or returned. The question of persistence is prior to the question of phase, since a cycle that does not persist has no phase; the gravest condition of a relation is therefore not the negative phase but the failure of persistence, and the catastrophic cycle, for all its depletion, is a living relation in a way that extinction is not.

13.2 The flourishing spiral

The flourishing spiral is the regime of the good cycle. Its value is generated and returned, its recyclability sustains the cycle above the threshold of decay, its return distribution is, relative to the coupling, approximately symmetric, and the unfolding of each party is sustained rather than foreclosed. Across its turns it accumulates a positive phase: the parties' cognition of the good deepens, their practice enriches, and they develop, through the shared life, into more than they were. The flourishing spiral is the regime the normative specification of §8.5 describes, and it is, by the argument to follow, necessarily a just regime: the symmetry of its return distribution is the condition of its positive phase, and a relation whose return is severely skewed cannot sustain the ascent of all its parties, since the party consigned to the tail is depleted rather than developed by the turning.

13.3 The catastrophic cycle

The catastrophic cycle is the regime of the bad cycle that nonetheless persists. Its movement is sustained, its form is intact, and it may score well on aggregate satisfaction; but it accumulates a negative phase, depleting its parties, or one of them, turn upon turn. This is the regime in which the orthogonal instruments of §10 do their characteristic work, for it is the regime a satisfaction measure cannot distinguish from the flourishing spiral, both persisting and both capable of a high mean, while the skew of return and the concentration of foreclosed undertakings distinguish them, the catastrophic cycle exhibiting the skew and the foreclosure that the flourishing spiral does not. The catastrophic cycle is the marriage that endures and depletes, the form maintained while one party, or both, is consumed in the maintaining; and it is the regime in which the injustice of a relation is most consequential, since its persistence prolongs the extraction that its intact form conceals.

13.4 Extinction

Extinction is the regime in which the cycle ceases to turn. Value is no longer generated, circulated, or returned; the parties no longer revise their sense of one another; practice halts; and the relation decays toward the terminal rest in which it is a relation no longer. Extinction is not a benign equilibrium, a relation at peaceful rest, but the cessation of the activity by which the relation existed (§6.2). It is the gravest regime in the order of existence, since it is the end of the relation as such, though it is not the gravest in the order of justice, since a catastrophic cycle may inflict, in its persistence, a depletion that an extinction would have ended. The relation between extinction and the catastrophic cycle is, in this respect, genuinely tragic: the persistence that distinguishes the catastrophic cycle from extinction is also the persistence of its extraction, and the cessation that would end the extraction is also the end of the relation.

13.5 Bifurcation between the regimes

The passage of a relation between these regimes need not be gradual. As the conditions of a relation drift, its slowly varying parameters in the sense of §4.5, its behaviour may change smoothly through a range and then, at a critical value, change in kind: a flourishing spiral may, as its recyclability declines past a threshold, lose the persistence of its ascent and tip into a catastrophic cycle or toward extinction; a catastrophic cycle may, as its depletion exhausts the conditions of its persistence, tip into extinction; and a relation near a threshold may be carried across it by a small further change in its sustaining conditions. This is the dynamical content of an observation common to the experience of relations, that their decline is often not gradual but punctuated, a long apparent stability followed by a rapid passage into a different regime. The language of bifurcation renders this: the difference between regimes is a difference in kind, and a relation may be carried from one to another by a change in degree that crosses a critical value, so that a small neglect, compounded, may tip a relation across a threshold from which its return is not symmetric to its approach.

13.6 Justice as the internal condition of the good cycle

The section closes by establishing the thesis toward which the regimes have been arranged: that justice is not an external constraint upon the flourishing spiral but the internal condition of its persistence with positive phase.

Justice is the internal condition of the flourishing spiral. The flourishing spiral, the persisting cycle of positive phase, is necessarily just, and the catastrophic cycle is the form that injustice takes in a persisting relation. A cycle whose return distribution is severely skewed cannot accumulate a positive phase for all its parties, since the party consigned to the low-return tail is depleted, not developed, by the turning; its phase, for that party, is negative, and the cycle is for that party catastrophic however it appears in the aggregate. A positive phase for all the parties therefore requires a return distribution that is not severely skewed, which is to say it requires the condition of justice. Justice is, accordingly, not a constraint added to the flourishing of a relation from outside it, but the internal condition under which a cycle can ascend for all its parties rather than for some at the cost of others. This is the dynamical form of the prior paper's thesis that justice constitutes rather than constrains eudaimonia, and the skew of the return distribution (§10.3.3) is its statistical signature: a relation is a flourishing spiral only if its return is, relative to its coupling, approximately symmetric, and a severely skewed return is the signature of a catastrophic cycle wearing, in the aggregate, the appearance of a spiral.

The three regimes, so arranged, gather the results of the paper into a single dynamical picture. A relation lives by the persistence of its cycle and flourishes by the positive phase of its turning, and it flourishes for all its parties only if its turning is just. The instruments of evaluation proxy these features, the recyclability proxying persistence, the skew proxying the justice on which the positive phase depends, and the satisfaction measures proxying an aggregate that conceals the distinction the skew reveals; and the moments of the cycle cultivate them, the practice forming the habits that sustain the turning, the reflection guarding against the forged appearance of a spiral, and the re-cognition carrying the phase of each turn into the next. The paper now concludes, in the plural conclusions its method requires.

14. A Longitudinal Case: One Shared Life through the Cycle

The machinery the paper has developed is abstract, and a foundational treatment is strengthened by an extended case in which the abstractions are seen to operate together on a single shared life across its course. This section supplies such a case. The couple is constructed and anonymous, a composite and not a record, and the numbers, where they appear, are stipulated and illustrative under the operational concession (§2.3); the case claims no empirical authority

and serves only to display the machinery in concerted operation. The two parties are called A and B throughout. The case is organised by the seasons of a shared life, and within each season the moments of the cycle and the frameworks drawn upon are traced, so that the reader may see the matrix of §7 instantiated in a particular life and the regimes of §13 approached and, at the last, chosen between.

14.1 Courtship: the first turns of the cycle

In the first season the cycle turns quickly and its turns are small. A and B, meeting, begin to cognise what a shared life between them might be: at first in the lived and largely unsymbolised register of the phenomenological framework (§8.3), the felt sense that there is something here, an apprehension preceding its articulation; then, as the season advances, in the normative register, as each begins to apprehend what they would value in a life shared with the other, and whether the other's unfolding and their own can be sustained together. The practice of this season is light, the cultivation of small recurrences, a way of spending time, a rhythm of contact, the first habits of attention, and the virtue-theoretic framework (§9.1) is already in operation, though the dispositions it forms are as yet shallow, the *hexis* not yet set. Evaluation is continuous and almost wholly basal (§5), each appraising, beneath reflection, whether the relation is rising; explicit evaluation is rare and informal. The recyclability of value (§10.3.1) is high, since in this season contributions are met by regenerating responses readily, and the cycle turns with a positive phase, each turn returning to the parties a deepened cognition of the good of the relation. The holonomy of the season is strongly positive: the parties end it developed by it, knowing more of what they value and of one another, the spiral ascending.

14.2 The forming of a joined life: marriage and its re-cognition

The passage to a joined life is a re-cognition of unusual depth (§12.1). The cognition of the good is reconceived under altered conditions, the relation now formally and practically joined, the couple's goods now deeply coupled in the sense of §10.3.2, so that much of the value each generates is now owed back through the relation. The practice of this season is the formation of the household and its manner, the *habitus* of §9.1, and it is here that the cultivation-not-legislation constraint (§9.2) first bears weight: as the couple forms the recurring practices of a joined life, the division of its sustaining labour, the rhythms of its days, the question arises, at first unremarked, whether these practices are jointly authored and revisable or are settling, by the gradual mechanism of habituation (§9.1), into a regime one administers and the other keeps. In the case as constructed, the season is one of high mean satisfaction: both parties report contentment, the relation is manifestly persisting, and an explicit evaluation by the instruments of §10.2 would record a flourishing relation.

Beneath the high mean, however, a skew is beginning to form. B has assumed the larger share of the sustaining labour, and the value this labour generates returns disproportionately to A, whose own undertakings proceed while B's are increasingly deferred. The skew of the return distribution (§10.3.3) is, in this season, slight, and it is concealed by the high mean satisfaction and by the season's genuine warmth; the basal appraisal of both parties registers the relation

as good, B not yet having symbolised the accumulating deferral of B's own unfolding. This is the season in which the divergence between the genuine and the forged spiral (§13.6) originates, unremarked, in a distribution whose skew is not yet large enough to disturb the felt warmth that conceals it.

14.3 The middle years: the bifurcation approached

In the middle years the slight skew, compounded turn upon turn, grows. The mechanism is the one the paper has described: each turn of the cycle returns to A a developed cognition and an accomplished undertaking, and to B a deferred undertaking and a labour unreturned, and the re-cognition that closes each turn (§12.2) carries this asymmetry forward, so that the cognition of the good with which each successive turn begins is, for A, enriched, and for B, narrowed. The holonomy of the cycle has become, in the terms of §13.6, positive for A and negative for B: the same cycle that develops A depletes B, and the relation is, for B, already a catastrophic cycle (§13.3) wearing, in the aggregate, the appearance of a flourishing spiral.

This is the season in which the orthogonal measures of the paper do their work. The mean satisfaction remains moderately high, raised by A's contentment and by B's still-only-partially-symbolised appraisal; an evaluation by satisfaction alone would not register the developing injustice. The skew of the return distribution, by contrast, is now pronounced, B's normalised return having fallen well below the baseline the deep coupling sets (§10.4), and the concentration of foreclosed undertakings in B (§10.5) is marked. The two orthogonal signatures coincide on B, identifying B as the party consigned to the low-return tail and the party whose unfolding the relation forecloses, the two faces of the single injustice the paper has described. The relation is approaching a bifurcation (§13.5): the slight skew, compounded, has brought it near a threshold at which its regime may change in kind.

14.4 The turning point: reflection and the choice of regime

The bifurcation is reached at a moment of reflection (§11). In the case as constructed, B's appraisal at last symbolises what the basal register has long registered: that B's undertakings have been systematically foreclosed and B's labour systematically unreturned, that the relation has been, for B, a catastrophic cycle. This symbolisation is the work of reflection in its sharpest form, the reading of the relation's measured and felt satisfaction against the skew and the foreclosure the satisfaction concealed (§11.1), and the reassertion of the question of justice that the high mean had suppressed (§11.2). The relation now stands at the bifurcation, and the paper's three regimes (§13) are the three paths from it.

The first path is the continuation of the catastrophic cycle: the skew is acknowledged and not corrected, B's symbolised grievance is met by A's reassertion of the existing distribution, perhaps by the legislation of the existing habits as the rule of the relation (§9.2), and the cycle persists in its depleting form, B now depleted knowingly rather than unawares. The second path is extinction (§13.4): the skew is acknowledged and found uncorrectable, and the cycle ceases to turn, the relation decaying toward the terminal rest in which it is a relation no longer.

The third path is the restoration of a flourishing spiral: the skew is acknowledged and corrected, the sustaining labour redistributed, B's foreclosed undertakings reopened, the coupling-based return restored toward symmetry, and the cycle resumes a turning that ascends for both. The third path is the just one, not because it preserves the relation, which the first also does, nor because it ends the extraction, which the second also does, but because it restores the condition under which the cycle can ascend for both parties rather than for one at the cost of the other (§13.6). The case does not stipulate which path is taken, since the paper has argued that the good of a shared life is unguaranteeable (§12.3) and no machinery determines the choice; it displays the bifurcation and the three regimes between which the reflection of this season must choose.

14.5 What the case displays

The case displays the machinery of the paper in concerted operation: the cycle turning through its moments and seasons (§6), the frameworks drawn upon at each moment (§7), the basal and explicit registers of appraisal (§5), the divergence of the mean from the distribution and the consequent divergence of the genuine from the forged spiral (§10.3.3, §13.6), the compounding of holonomy across turns (§12.2), the coincidence of the skew of return with the foreclosure of unfolding as two signatures of one injustice (§10.5), and the bifurcation at which a relation's regime is chosen. It displays, above all, the paper's central practical claim: that a relation may be, for one of its parties, a catastrophic cycle while presenting to measurement and even to the parties' own unreflective appraisal as a flourishing one, and that the work of reflection is to read the satisfaction against the distribution it conceals, so that the injustice may be symbolised and the bifurcation reached at which it may, though it need not, be corrected. The case is constructed and proves nothing; it shows what the paper's machinery, applied to a shared life, makes visible, and it is offered as the concrete display of an apparatus whose general statement the preceding sections supply.

15. The Cross-Cultural Variation of Flourishing and Its Practice

The account developed so far has proceeded at a level of generality that abstracts from the cultural particularity of the shared lives it concerns, and this abstraction, useful for the statement of structure, conceals a variation that a foundational treatment must address. The conception of flourishing, the practices through which a shared life is cultivated, the standards by which it is evaluated, and the very methods by which it is studied vary across cultures, and the variation is not noise around a universal mean but a systematic difference in what flourishing is taken to be and how it is pursued. This section addresses three strands of this variation: the cross-cultural variation in the conception of happiness and flourishing, the variation across scholarly traditions in the method by which flourishing is studied, and the variation across cultures in the practices of marriage and family. It then locates the variation within the lifecycle, treating each moment of the cycle as the site of a culturally specific cognition and practice. Before the strands are taken up, the basis on which cultures are selected and compared is stated, so that the comparison proceeds by a method rather than by an unexamined choice of

cases. The section draws throughout on the operational concession and on the framework of symmetry-broken phases (§2.2), of which the cultural variation is a further and consequential instance.

15.1 The basis of the comparison: method and case selection

A comparison across cultures requires a principled basis for the selection of the cultures compared and for the dimensions along which they are compared, on pain of mistaking an arbitrary choice of cases for a representative sample of human variation. The comparative method in the social sciences supplies two complementary logics of case selection, both descending from Mill's methods of agreement and difference [43] and systematised for social inquiry by Przeworski and Teune [49]. The most-similar-systems design selects cases alike in most respects and differing in the variable of interest, so that a difference in outcome may be attributed to that variable; the most-different-systems design selects cases differing in most respects, so that a shared outcome may be attributed to the few factors they hold in common [38]. The two designs are the principal means of managing the comparison of a small number of complex cases.

The cultures to be compared are located on an empirically derived map of cultural variation, so that their selection may be assessed for coverage and representativeness rather than asserted. The most developed such map is the one derived by Inglehart and Welzel from the World Values Survey, which resolves cross-national variation into two principal dimensions, a dimension from traditional to secular-rational values and a dimension from survival to self-expression values, and which locates national cultures in clusters shaped by their religious and historical heritage, among them the Protestant European, the Catholic European, the English-speaking, the Confucian or East Asian, the Latin American, the Orthodox, the South Asian, and the African-Islamic [31]. Comparable coordinate systems are supplied by Hofstede's dimensions of national culture, of which the individualism-collectivism dimension is the one most pertinent here [29], and by Schwartz's cultural value orientations [55]. These maps make the selection of cases assessable: a selection covers the variation well to the extent that it spans the principal clusters, and a case represents its cluster to the extent that it is typical of it.

The present treatment selects its cases on this basis, and states the selection openly. Four cultures are taken as the cases of detailed analysis, China, Japan, Continental Europe, and the United States, and the selection is a combination of the two comparative designs. China and Japan are two cases within the East Asian, broadly Confucian cluster, alike in their interdependent heritage and differing in its present configuration, and Continental Europe and the United States are two cases within the Western cluster, alike in their independent heritage and differing in their institutional and methodological traditions; the within-cluster pairs constitute most-similar comparisons, and the between-cluster contrast of the Western with the East Asian pair constitutes a most-different comparison. The selection is, deliberately, weighted toward the cultures the present writer is best placed to treat with care, and it is for that reason a selection of cases for detailed analysis and not a claim to global coverage. Its limitation is therefore stated plainly: the four cases span the principal axis of individualism and interdependence but do not span the full cultural map, and several major clusters, the South Asian,

the African-Islamic, the Latin American, and the Orthodox, enter the treatment only as points of contrast and not as cases of detailed analysis. Where they bear on the argument they are noted, in particular the South Asian institution of arranged marriage and the joint family, the Latin American combination of collectivism with an actively expressed positive emotionality that differs from the East Asian emotional balance, and the Islamic configuration of kinship obligation; but the detailed analysis remains that of the four core cases, and the conclusions are offered with the representativeness this selection affords and no more.

15.2 The cross-cultural variation in the conception of flourishing

The conception of happiness itself varies across cultures, and the principal axis of variation is the one between an independent and an interdependent construal of the self and its flourishing. In the cultural-psychological tradition, the European-American model of the self is independent, defined in terms of individual attributes, autonomy, and the pursuit of personal goals, while the East Asian model is interdependent, defined in terms of social relationships and the adjustment of the self to a relational whole [41]. Happiness is construed accordingly. In North American contexts, happiness tends to be defined in terms of personal achievement, and individuals are motivated to maximise positive affect and to seek happiness through autonomous agency; in East Asian contexts, happiness tends to be defined in terms of interpersonal connectedness and the balance of the self with others [65]. The difference extends to the structure of emotional experience: where the North American construal seeks to maximise positive over negative affect, the East Asian construal tends toward a dialectical balance in which positive and negative affect are held together rather than the former maximised, and in which happiness is understood as fraught with potential social consequence rather than as an unalloyed good to be pursued [64]. The interdependent construal has been developed into a distinct conception of interdependent happiness, predicated on interpersonal harmony, quiescence, and ordinariness rather than on personal high arousal [27].

This variation bears directly on the conception of flourishing the present series has developed, and the bearing is instructive rather than merely cautionary. The series has construed flourishing as the unfolding of each party's own dynamics, sustained within a shared life whose value circulates and returns; the conception is neither purely independent, since the unfolding is sustained within and returns to a relation, nor purely interdependent, since it is the unfolding of each that is at issue and not the submersion of each in a relational whole. The conception occupies, deliberately, a position between the independent and interdependent construals, and the cross-cultural evidence locates it: it is a conception for which the relation is the medium of each party's development and the development is genuinely of each, which is neither the autonomous self-development of the independent model nor the relational adjustment of the interdependent one, but a structure in which the two are made compatible by the requirement that the relation return to each what each gives. The cultural variation is, in the terms of §2.2, a set of symmetry-broken phases of the cognition of flourishing, the independent and interdependent construals being two such phases, and the series' conception an attempt to articulate a structure of which both are partial determinations.

15.3 The comparative variation in the method of study

A second variation, less often remarked in connection with the first but consequential for a foundational treatment, is the variation across scholarly traditions in the method by which flourishing and the shared life are studied. The methodological division between an explanatory, quantitative, positivist social science and an interpretive, qualitative, hermeneutic one is itself culturally and geographically patterned, and the pattern bears on the framework-divide of §2.2.

The interpretive tradition originates in the nineteenth-century German distinction between the natural and the human sciences, the *Naturwissenschaften* and the *Geisteswissenschaften*, and in the corresponding distinction between explanation, *Erklären*, the method of the natural sciences, and understanding, *Verstehen*, the method of the human sciences, drawn by Droysen and Dilthey and developed by Weber [14, 69]. On this tradition, the social world is constituted by the meanings its participants give it, and its study requires the interpretive recovery of those meanings, the production of what Geertz called thick description, which penetrates the webs of significance within which human action is intelligible rather than reducing action to observable behaviour [20]. The positivist tradition, by contrast, holds that the social world is continuous with the natural, that it is to be studied by the observation and measurement of behaviour and the discovery of regularities, and that what cannot be brought to measurement cannot be known. The two traditions are unevenly distributed: the interpretive and hermeneutic tradition has been more central to Continental European social thought, while the positivist and quantitative tradition has been more dominant in American social science, a difference of scholarly culture that patterns how flourishing is studied on either side.

This methodological variation is, for the present paper, the framework-divide of §2.2 appearing at the level of scholarly culture rather than of the individual investigator. The positivist framework and the phenomenological-hermeneutic framework, which the paper has treated as symmetry-broken phases of the study of flourishing, are not merely options available to any investigator but traditions institutionalised in different scholarly cultures, the one measuring what can be measured and the other interpreting what is meant. The recognition has a consequence for the paper's method. The polyphonic refusal to subordinate one framework to another (§2.2) is, read in this light, a refusal to subordinate one scholarly culture's method to another's, and the operational concession, which admits the structured measure while denying it the status of the real, is a way of drawing on the positivist tradition's instruments without adopting its claim that what those instruments measure exhausts what flourishing is. The paper's stance toward the methodological divide is the stance the cultural variation recommends: that the explanatory and the interpretive methods are partial determinations of the study of a flourishing that neither exhausts, and that a foundational treatment must draw on both without resolving their difference by the victory of one.

15.4 The cross-cultural variation in the practices of marriage and family

A third variation concerns the practices of marriage and family through which a shared life is cultivated, and it is the variation most directly pertinent to a praxis of intimate flourishing.

The conception of what a marriage is, what a family is, and what the parties owe one another varies across cultures along several axes, of which three are salient.

The first axis concerns the meaning and basis of marriage. A long sociological account traces, in the Euro-American context, a transition from the institutional marriage, founded on social obligation and the fulfilment of prescribed roles, through the companionate marriage of the mid-twentieth century, founded on the personal ties of affection and companionship, to the individualised marriage of the present, founded on personal choice and the self-development of the partners [9]. The transition is held to have weakened the social norms that once defined the partners' behaviour, a process termed the deinstitutionalisation of marriage, though its extent varies by social class and the institution retains, especially among the more educated, a central place [10]. The individualised marriage, in which the partners actively select one another, negotiate their commitment, and pursue self-development within the relation, is the form the European sociology of intimacy has described as the normal chaos of love and the transformation of intimacy [6, 21].

The second axis concerns the relation of the couple to the wider family. In the more individualist Euro-American contexts, the married couple tends to be the primary unit, relatively detached from the extended family; in the more collectivist East and Southeast Asian contexts, the couple is embedded in an extended family to which it owes ongoing obligations, and the marriage is as much a relation between families as between individuals. The obligation of adult children to their parents, filial piety, is a central organising norm of the East Asian family, and recent work distinguishes a reciprocal filial piety, founded on affection and a lasting positive bond, from an authoritarian filial piety, founded on obedience to social obligation, the former proving more nearly universal across cultures and the latter more culturally specific [72]. The intergenerational solidarity of families, the structure of obligation and support across generations, is itself a subject of formal comparative study [7], and the autonomy-relatedness relation, on which the independent and interdependent construals divide, has been argued to admit a synthesis in which autonomy and relatedness are not opposed but jointly developed, a model of particular relevance to families in modernising societies [34].

The third axis concerns the direction and pace of change. The family systems of East Asia have been described as at a crossroads, meeting Western individualism, modernity, and changing gender roles against a background of persisting traditional obligation, so that the contemporary East Asian family combines elements of the interdependent and the independent models in a configuration unlike either [32]. The variation is therefore not static, a fixed map of cultural difference, but dynamic, a set of trajectories of change that differ in direction and pace across cultures. These variations are summarised in Table 5.

15.5 The cultural variation across the moments of the cycle

The variations surveyed above are not external to the lifecycle but enter at each of its moments, and the foundational value of the account is increased by tracing how each moment is culturally inflected. The lifecycle furnishes a structure within which the cultural variation can

Table 5: Axes of cross-cultural variation in the conception and practice of marriage and family.

Axis	Individualist pole (Euro-American)	Interdependent pole (East Asian)	Sources
Basis of marriage	Individualised: personal choice, self-development; deinstitutionalised	Institutional and relational: obligation, family alliance, prescribed roles	Cherlin [9, 10]
Couple and wider family	Couple as primary unit, detached from extended family	Couple embedded in extended family with ongoing obligation	Bengtson and Roberts [7], Ji [32]
Intergenerational norm	Weak filial obligation; support voluntary	Filial piety, reciprocal and authoritarian; support obligatory	Kağıtçıbaşı [34], Yeh et al. [72]
Conception of intimacy	Transformation of intimacy; the normal chaos of love	Harmony, ordinariness, interdependent happiness	Beck and Beck-Gernsheim [6], Giddens [21], Hitokoto and Uchida [27]

be organised, and the organisation shows the variation to be systematic rather than diffuse.

At the moment of *cognition*, the cultural variation is the variation in what flourishing is taken to consist in. The independent construal cognises the flourishing of a shared life as the mutual support of two self-developing individuals; the interdependent construal cognises it as the achievement of relational harmony and the fulfilment of relational obligation; and the conception of this series, the just unfolding of each within a returning cycle, cognises it as a structure of which both are partial. The cultural variation at this moment is a variation in the normative specification of §8.5, and a foundational treatment must hold that the specification, though it aims at a structure, is realised in culturally specific forms.

At the moment of *practice*, the cultural variation is the variation in the habits, household forms, and family obligations through which a shared life is cultivated. The individualised marriage is practised through the negotiation of commitment and the mutual support of self-development; the interdependent family is practised through the fulfilment of filial and relational obligation and the maintenance of harmony; and the family manner cultivated, the *habitus* of §9.1, differs accordingly, the one forming dispositions of autonomous partnership, the other dispositions of relational embeddedness. The cultivation-not-legislation constraint of §9.2 takes a culturally specific form: what counts as the legislation of a habit, and what as its cultivation, depends on the cultural understanding of the family’s authority, so that a practice that is cultivation in one cultural context may be experienced as legislation in another.

At the moment of *evaluation*, the cultural variation is the variation in the standards by which a shared life is judged to be going well, and it bears on the measurement of §10. The instruments surveyed there were developed largely within the independent, Euro-American construal, and they measure largely what that construal counts as flourishing, the individual’s satisfaction and self-development; applied across cultures, they may systematically mismeasure the

Table 6: The cultural inflection of the moments of the lifecycle: how each moment differs under the independent and interdependent construals.

Moment	Independent construal	Interdependent construal
Cognition	Flourishing as mutual support of two self-developing individuals	Flourishing as relational harmony and fulfilment of obligation
Practice	Negotiation of commitment; cultivation of autonomous partnership	Fulfilment of filial and relational obligation; embeddedness
Evaluation	Individual satisfaction and self-development; existing instruments fit	Relational harmony; existing instruments may misregister
Reflection	Conducted between the partners; standard is the partnership	Conducted with reference to the extended family and lineage
Re-cognition	Holonomy as development of a partnership	Holonomy as development of a lineage

flourishing of interdependent shared lives, registering as deficient a relational harmony that the interdependent construal counts as flourishing, or registering as flourishing an autonomous self-development that the interdependent construal counts as a failure of relational obligation. The operational concession bears with particular force here: the structured measure is a proxy not only for an unsymbolised value but for a culturally specific construal of that value, and its cross-cultural application requires a caution beyond the one the concession already imposes.

At the moments of *reflection* and *re-cognition*, the cultural variation is the variation in how a shared life revises its sense of itself and transmits what it has learned. The transmission of a family manner across generations, the *habitus* inherited and revised, is more central to the interdependent family, in which the marriage is embedded in a lineage, than to the individualised marriage, in which the couple is relatively detached; and the re-cognition that closes a turn of the cycle is, in the interdependent context, a re-cognition conducted with reference to the extended family and its continuity, where in the individualist context it is conducted more nearly between the partners alone. The holonomy of the cycle, the phase accumulated across its turns, is in the one case the development of a lineage and in the other the development of a partnership, and the difference is a difference in the unit across which the flourishing is reckoned. Table 6 summarises the cultural inflection of the moments of the cycle.

15.6 The standing of the cross-cultural account

The cross-cultural variation does not refute the structural account but locates it, and the relation between the two requires statement. The account of the lifecycle, of the moments and their dynamics, of the cycle's persistence and phase, and of justice as the internal condition of the good cycle, is offered as a structure, and the cultural variation is the variation in the determinate forms the structure assumes. The independent and interdependent construals are two such forms, two symmetry-broken phases of the cognition and practice of a shared flourishing, and the series' conception, the just unfolding of each within a returning cycle, is offered not as a third culture's construal set beside them but as an attempt to articulate the

structure of which the cultural construals are partial determinations. The attempt is itself culturally situated, written from a particular location and formed by particular traditions, and it claims neither a view from nowhere nor a neutrality among cultures, which would be the metalanguage the series denies. It claims only to articulate, from its situation, a structure that the cultural variation instances, and to hold its own articulation open to the correction that the encounter with each cultural form supplies. The justice condition, in particular, is offered across the cultural variation: that the value a party generates return to that party, and that no party be reduced to the sustaining fuel of a relation that returns to it nothing, is a condition a shared life may fail in any culture, by the culturally specific means each culture affords, and the skew of the return distribution (§10.3.3) is a proxy for an injustice that the independent and the interdependent family are each, in their own forms, capable of.

16. The Foundational Role of the Paper in the Series

This paper is the programmatic and foundational text of the part of the series concerned with the praxis of flourishing, and the present section makes that role explicit, since a foundation is of use only if what it founds is stated. The section sets out the instruments the paper supplies to the subsequent papers, the questions it leaves open for them, and the interfaces at which they will connect to it. It is written for the reader of the series as a whole, and it may be passed over by the reader of this paper alone, for whom the preceding sections are complete in themselves.

16.1 The instruments the paper supplies

The paper supplies to the subsequent papers a set of instruments, each developed here in its general form and available there for application to particular cases.

The first is the *lifecycle of a shared flourishing* as a real cycle (§6): the articulation of a shared life into the moments of cognition, practice, evaluation, reflection, and re-cognition, the thesis that the cycle is a self-sustaining movement whose persistence conditions the relation's existence, and the dynamical vocabulary of persistence, phase, and bifurcation in which the cycle's regimes are described. A subsequent paper concerned with any particular practice of a shared life may locate that practice within the cycle, asking at which moment it falls and how it bears on the cycle's persistence and phase.

The second is the *operational concession* (§2.3): the methodological licence to adopt, where a practice must assess, a structured proxy for a value that is not symbolised, in the explicit awareness that the proxy is not the value. Every subsequent paper that assesses anything inherits this concession, and inherits with it the discipline of marking what is proxy and what is real, so that the series' results are read throughout as operationally warranted and not as measurements of the unsymbolised value.

The third is the *skew of the return distribution* as a structured proxy for injustice (§10.3.3): the thesis that the injustice of a relation's value cycle has a statistical signature in the skewness

of the distribution of returned value relative to a coupling-based baseline, and the associated apparatus of expected recyclability, coupling-based baseline, and the branching-process model of return. A subsequent paper concerned with the justice of any particular cycle of value, intimate or economic, may bring this measure to bear, asking whether the cycle returns to its generators or consigns one of them to the low-return tail.

The fourth is the *distinction between the genuine and the forged cycle* (§11.1, §13.6): the thesis that a cycle may persist and present a high aggregate satisfaction while being, in its phase and its distribution, a catastrophic cycle wearing the appearance of a flourishing spiral, and that the orthogonal measures of skew and foreclosure distinguish the two. A subsequent paper concerned with any cycle that presents itself as good may apply this test, asking whether the appearance is borne out by the distribution beneath it.

The fifth is the *cognitive and computational basis of appraisal* (§5): the account of appraisal as continuous inference upon a partially observable state, conducted in unsymbolised value, with its decision-theoretic and free-energy formalisations. A subsequent paper concerned with how a relation registers its own state, or with how a practice is sustained or fails, may draw on this basis.

16.2 The questions the paper leaves open

The paper leaves open, for the subsequent papers and for other work, a set of questions it has posed without resolving. The branching-process model of return (§10.3.4) is advanced in its form and not validated; the assignment of value to the acts of a shared life, on which any estimation of return depends, is identified as a substantial empirical problem and not solved; the formalisation of the lifecycle as a dynamical system is offered as a structural analogy under the standing qualification that the system's own law is reconfigured by what it generates; and the proxies for the unfolding of each party (§10.5) are acknowledged to reach least adequately the value that lies nearest the unsymbolised. These open questions are the paper's bequest to the work that follows, and their statement is part of the foundation, since a foundation that concealed its incompleteness would be the false ground the series has throughout refused.

16.3 The interface to the study of particular cycles

The subsequent papers of this part of the series apply the instruments to particular cycles of value, and the present paper prepares their interface. A study of a particular cycle, on the apparatus developed here, proceeds by identifying the cycle's generators and their coupling, the value generated and its circulation, the distribution of return and its skew, and the cycle's persistence and phase; and it asks, of the cycle, whether it is a flourishing spiral, a catastrophic cycle, or a movement toward extinction, and whether its appearance of good is genuine or forged.

One such study is anticipated closely enough to be named. A consumption cycle, in which a good is desired, acquired, and enjoyed, and the desire renewed, may present every appearance of a flourishing cycle: the parties are satisfied, the cycle persists, and the satisfaction is real.

The apparatus developed here permits the question whether such a cycle is a genuine flourishing spiral or a forged one, by directing attention past the satisfaction of the parties to the distribution of return across the whole network that sustains the cycle, including those whose labour produces the good consumed and who may be consigned, unseen by the satisfied parties, to the low-return tail. The skew of the return distribution, taken across the whole sustaining network and not only across the visible parties, is the instrument by which a consumption cycle that is internally satisfying may be found to be externally extractive, its internal holonomy positive and its full holonomy, reckoned across all whom it draws upon, negative. The study of such a cycle, as a case in which the genuine and the forged are distinguished by the apparatus of this paper, is the work of a subsequent paper, for which the present paper is the foundation, and to which it hands the instruments here developed.

17. Limitations, Objections, and Replies

A foundational treatment is strengthened by gathering, and meeting directly, the objections its apparatus invites, rather than leaving them dispersed among the cautions of the several sections. This section states the principal objections to the paper's approach and the replies the paper offers, in the awareness that the replies dissolve some objections and only mitigate others, and that the latter mark the genuine limitations the paper bears.

17.1 That the skew criterion misjudges a legitimate division of labour

The first objection holds that the skew of the return distribution will misjudge as exploitation a division of labour that is in fact legitimate. Parties to a shared life may, the objection runs, justly specialise, one bearing more of the sustaining labour and the other more of some other contribution, and a measure that reads asymmetric return as injustice will condemn a specialisation the parties have freely and fairly chosen.

The reply turns on the coupling-based baseline (§10.3.2). The criterion does not read asymmetric contribution as injustice, nor asymmetric return as such; it reads as injustice the systematic shortfall of one party's return below the baseline that the coupling and the generation set. A legitimate specialisation, in which one party bears more sustaining labour and is returned to in proportion, through the relation's circulation, to the value that labour generates, produces no skew, since the return tracks the generation; the normalised return of both parties is near unity, and the distribution is symmetric. The skew arises only when the value a party generates does not return to that party, which is not the mark of specialisation but of extraction. The objection conflates an asymmetric division of tasks, which the criterion does not condemn, with an asymmetric return on a symmetric generation, which it does. The reply, however, concedes a residual difficulty: the baseline itself depends on the assignment of value to contributions (§10.4), and a culture or a couple that systematically undervalues the sustaining labour in that assignment will set a baseline that conceals the extraction, reading a genuine shortfall as proportionate. The criterion is only as just as the valuation that feeds it, and the valuation is the contestable step the concession marks.

17.2 That modelling a relation as a value network reifies intimacy

The second objection holds that to model a shared life as a network of value generation and return is to reify intimacy, to reduce a relation of love to an economic exchange, and that the reduction falsifies the very thing it claims to illuminate.

The reply distinguishes the model from a metaphysics. The paper does not claim that a relation is a value network, nor that love is exchange; it claims that the network is a structured proxy (§2.3), an operational instrument that makes one feature of a relation, the distribution of its returns, assessable, and that this feature, though it is not the relation, is a feature a relation has and one whose maldistribution is an injustice the parties have reason to detect. The value at issue is, throughout, the transversal and largely unsymbolised value of the prior papers (§5), not a monetary or exchangeable quantity, and the paper has insisted that the structured proxy does not reach it. The reduction the objection fears is exactly the reduction the operational concession refuses: to mistake the proxy for the relation, the measured return for the love, is the cardinal error the paper has named (§11.3), and the paper commits it no more than a cartographer, mapping a country's rivers, claims that the country is its rivers. The model illuminates a feature against the background of a relation it does not claim to exhaust, and the warmth, the meaning, and the unsymbolised texture of the shared life, which the model does not capture, are precisely what the paper's Envoi and its insistence on the matter of the field return to.

17.3 That the operational concession immunises the paper against criticism

The third objection holds that the operational concession is too convenient: by declaring in advance that its measures are proxies that do not reach the real value, the paper immunises itself against every criticism, since any objection to a measure can be met by the reply that the measure was never claimed to be more than a proxy. The concession, on this objection, is not a discipline but an evasion.

The reply grants the danger and specifies the discipline that averts it. A concession that licensed any measure whatever, on the ground that all are merely proxies, would indeed be an evasion; the paper's concession does not. It requires of a proxy that it be operationally warranted, that it make some genuine feature assessable, that its results be read as evidence and not as measurement, and that it never be possessed as the truth of the relation (§11.3); and it holds the proxy answerable to the basal appraisal it proxies, so that a measure systematically at odds with the parties' considered appraisal is thereby impugned. The concession is, in this respect, a standard the measures must meet and not a blanket exemption: it constrains how a measure may be used, and the constraint is violable, as the cardinal error of possessing the measure as truth shows. The objection would hold against a concession that exempted measures from criticism; it does not hold against one that, as here, specifies the limited use under which alone a measure is admitted and marks the misuse that breaks it.

17.4 That to speak of justice in intimacy is a category mistake

The fourth objection holds that justice is a category proper to the public and political sphere, to the distribution of goods among strangers under institutions, and that to import it into intimacy is a category mistake, since intimate relations are governed by love and care, which transcend and even oppose the calculative posture of justice.

The reply is that the opposition between love and justice is itself the ideology under which intimate injustice is concealed, and that the ethics of care, properly understood, requires rather than opposes the justice of care's distribution (§3.2). The labour of sustaining a shared life is labour; its systematic extraction from one party is an injustice whether or not the relation is loving, and indeed a loving relation is precisely the site at which such extraction is most effectively concealed, since the language of love supplies the ideology under which the sustaining labour is figured as freely given and its under-return as natural (§10.3.3). To hold that justice has no place in intimacy is not to protect intimacy from a calculative intrusion but to remove from the exploited party the one vocabulary in which their exploitation could be named. The paper's claim is not that intimacy should be calculative, but that the refusal to assess the justice of an intimate relation's distribution is the condition under which its injustice is sustained, and that a love worthy of the name does not require, and is not damaged by, the justice of its returns. The reply, however, concedes a limit: the assessment of justice is an instrument to be drawn upon when injustice is suspected, not a posture to be maintained continuously, and a relation conducted as a perpetual audit of its returns would have made the measure the truth of the relation, committing the cardinal error in a new form. Justice is the internal condition of the good cycle (§13.6), not the continuous activity of the parties within it.

17.5 The residual limitations

The replies dissolve the objections that rest on misunderstanding, the conflation of asymmetric return with asymmetric task, the mistaking of the model for a metaphysics, the reading of the concession as exemption, and the opposition of love to justice. They leave standing a set of genuine limitations, which the paper records as its own. The valuation of contributions, on which the whole quantitative apparatus rests, is an operational stipulation that no measurement discharges, and a biased valuation yields a biased assessment (§17.1). The network model is unvalidated and its estimation an unsolved empirical problem (§B.2). The dynamical model is a structural analogy under the standing qualification that the relation's law is reconfigured by what it generates. The proxies for the unfolding of each party reach least adequately the value that lies nearest the unsymbolised. And the whole apparatus is offered for the central case of the dyad and its coupled network, with the cross-cultural variation (§15) locating but not exhausting the forms the apparatus must take across the range of human shared lives. These are the limitations a foundational treatment bequeaths to the work it founds, and their statement is not a weakening of the foundation but a part of it, since a foundation that concealed its limits would be the false ground the series has throughout refused.

18. Conclusions at the Boundaries of the Frameworks

The paper terminates as the prior papers of the series have, not in a single conclusion that would gather the frameworks into a possessed whole, but in plural conclusions, each stated from within a framework to the boundary of what that framework establishes. The plurality is required by the method: a flourishing that no single framework possesses cannot be concluded in the terms of any one, and the dialogue among the frameworks, each speaking to its boundary, is the only form a conclusion may take without installing one framework as the metalanguage the series denies.

18.1 From positivism

Positivism establishes that flourishing has measurable indicators, that these can be brought to validated and comparable instruments, and that the structured measures so obtained are a public and accumulable gain over private appraisal. It establishes the recyclability, the skew of return, and the rates of accomplished and foreclosed undertaking as structured proxies that make visible what aggregate satisfaction conceals. Positivism does not establish that its measures reach the value they proxy, which is unsymbolised and beyond their structuring; it cannot distinguish, from a satisfaction score alone, a flourishing spiral from a forged one; and it reaches its boundary at the point where the structured proxy must be read against the value it does not contain, which it consigns to reflection and to the basal appraisal it cannot replace.

18.2 From evidentialism

Evidentialism establishes that belief about flourishing, and the practice founded on it, ought to be proportioned to evidence and revised as evidence revises, and that this proportioning operates not only in the explicit weighing of studies but in the continuous belief updating that underlies all appraisal. It establishes the supported practices a cultivation may draw upon, and the form of the hypothesis test by which the justice of a value cycle might be assessed. Evidentialism does not establish what the singular shared life requires beyond the average its evidence reports, and it is mute where the value at issue cannot be brought to evidence at all; it reaches its boundary at the unsymbolised appraisal that is its own deep form and yet exceeds any evidence it can marshal.

18.3 From normative theory

Normative theory establishes that flourishing is the substantive freedom of each party to unfold what that party has reason to value, that this unfolding is plural and not aggregate, and that a just flourishing requires the return of value to its generators and the foreclosure of no party's unfolding. It establishes the normative specification against which the paper's evaluation is conducted. Normative theory does not establish that its specification is realised in a given life, which is a matter of practice and assessment under actual conditions; and it does not reach the lived and unsymbolised meaning in which the specification has its concrete sense for a particular couple, which it consigns to the phenomenological.

18.4 From virtue ethics

Virtue ethics establishes that flourishing is activity in accordance with cultivated excellence, that such excellence is formed by habituation in the concrete fabric of a shared life, and that the cultivation of disposition, and not the legislation of it, is the just form of this formation. It establishes the connection between the cognition of flourishing and its practice that the other frameworks leave implicit. Virtue ethics does not establish a procedure for the formation of the right dispositions, since a procedure applied from outside the joint practice would be the legislation it forbids; it reaches its boundary at the point where the cultivation of a shared disposition must proceed without a rule, in the unguaranteeable practice the prior paper described.

18.5 From phenomenology

Phenomenology establishes that flourishing is lived and interpreted before it is measured, that its givenness in the felt quality and the apprehended meaning of a shared life is the matter to which every measure is answerable, and that the basal appraisal in which a relation is continuously evaluated is conducted in this lived and unsymbolised register. It establishes the limit against which the structured measures are to be read. Phenomenology does not establish anything public, comparable, or accumulable, since what it describes resists exactly the structuring that would make it so; it reaches its boundary at the point where the lived meaning of a shared life must be communicated, assessed, or accumulated, which it consigns to the structured proxies it cannot itself supply.

18.6 From the cognitive and dynamical account

The cognitive and dynamical account establishes that appraisal is, at its basis, a continuous inference upon a partially observable state, conducted in unsymbolised value; that the relation is maintained by the persistence of this appraisal and the practice taken upon it, so that the cessation of the cycle is the relation's extinction; and that the cycle's regime is fixed by its persistence and the sign of its phase, with justice as the internal condition of a positive phase for all parties. It establishes the lifecycle as a real cycle and the three regimes as its possible fates. The account does not establish a fixed model of the cycle, since the value function of the relational decision process is itself revised by the cycle, in the manner the prior paper analysed as the absence of a fixed meta-value-grammar; it reaches its boundary at the reflexive reconfiguration that no fixed model captures, and consigns the matter, as the prior paper did, to the open question of a formalism whose own ground is not fixed.

18.7 The absence of a single conclusion

These conclusions do not sum. Each framework, developed to its boundary, establishes what it establishes and consigns to another what it cannot reach: positivism consigns the unsymbolised remainder to phenomenology and reflection, normative theory consigns the lived meaning to phenomenology and the realisation to practice, virtue ethics consigns the formation without a rule to the unguaranteeable practice, phenomenology consigns the public and comparable to the structured proxy, and the dynamical account consigns the reflexive remainder to the

open formal question. The flourishing of a shared life is the object none of them possesses and all of them partially determine, and the operational concession governs the whole: where the paper assessed, it assessed a structured proxy for a value it did not reach, and it bore the incompleteness rather than concealing it.

The absence of a single conclusion as the adequate conclusion. There is no single conclusion that gathers the frameworks into a possessed account of flourishing, not for want of one but because flourishing is not possessed by any framework and is in production across them. The plural conclusions are partial and mutually irreducible of necessity, and their dialogue, each framework speaking to its boundary and consigning what it cannot reach, is itself the polyphonic and unconcluded form that a just eudaimonia, cultivated and not constructed, assessed in proxy and not possessed, sustained as an open spiral and not secured as a state, requires of any account faithful to it. That the paper does not conclude in a single account is its fidelity to an object that is cultivated, processual, and unguaranteeable: the account, like the flourishing it treats, is sustained as an open movement and not secured as a possessed result.

The flourishing of a shared life is, in the end, neither measured nor possessed but lived, cultivated, and continually reappraised, in a cycle whose persistence is its life, whose phase is its rising or its decline, and whose justice is the condition of its rising for both. The frameworks illuminate it severally and from their boundaries; the cycle turns; and the good of a shared life is generated, where it is generated, in the turning, and not in any account of it, this one included.

Envoi

This paper has treated a shared flourishing as a cycle to be sustained, a fabric to be tended, and a turning to be appraised in a value that no measure reaches. It has spoken of recyclability and skew, of belief and bifurcation, of habit and household, because a practice requires what is operable, and it has conceded throughout that these are proxies for a good that is lived before it is assessed and that exceeds every assessment of it.

What the assessments leave out is the whole of the matter, and it returns at the close as it returned in the prior paper: a meal shared across years that no satisfaction scale records the worth of, a way of keeping a room that is the form a love has taken, a silence between two people that is full rather than empty and that no instrument can read. These are the matter of the field, and they are the observations through which, beneath all reflection, each appraises continually how things stand between them. The cycle of a shared life turns in them, and turns well when it turns justly, returning to each what each has given, foreclosing the unfolding of

neither, and rising, turn upon turn, into more than the two were.

A good so cultivated is not secured and then possessed. It is generated in the turning, and a relation flourishes by continuing to turn, justly, and ceases when the turning ceases. There is no state of it to be reached and kept; there is only the tending, the appraising, the reflecting, and the turning again, across the seasons of a shared life, from its beginning, through whatever it becomes, into its later years.

*For the forest girl,
that our turning, turned together, may rise;
that what returns to her be no less than she gives;
and that the good of our shared life be generated, and generated again,
in every turning of its years.*

愿我如星君如月，夜夜流光相皎洁。

Acknowledgements

This paper, on the flourishing of a shared life, was written for the one with whom the author hopes to share it. To her, the forest girl, who loves to travel and to be among wild and growing things, and who is pure of heart, and lovely, and kind, this work is dedicated, as the prior papers of the series have been. It is a paper about how two people might flourish together, justly and across the long course of a shared life, and it was written in the wish that the life the author hopes to share with her may be such a flourishing: that their cycle, turned together, may rise rather than merely repeat or decline; that what each gives the other may return to them both; and that the good of their shared life may be generated, and generated again, in every turning of its years. The theory is offered to others for whatever it is worth to them; the wish that animates it is for her, and for the happiness, lasting and lifelong, that the author hopes they will make together.

愿得一心人，白头不相离；岁岁长相见，年年共此时。

This is a working draft, circulated for discussion and not for citation. Its principal constructive proposals, the lifecycle as a real cycle whose persistence conditions the relation, the operational concession, and the skewness of the return distribution as a structured proxy for injustice, are advanced under the operational concession the paper states, as instruments warranted by their use and not as measurements of the value they serve.

A. Notation and Key Concepts

Because the paper introduces a number of constructs and, in its formal appendix, a number of symbols, this section gathers them for reference. The first table lists the principal symbols of the formal appendix; the second gathers the key concepts the paper introduces, with the section in which each is developed.

Table 7: Principal symbols of the formal appendix.

Symbol	Meaning
s, S	Hidden state of the relation, and its space
o, O	Observation (the lived fabric), and its space
a, A	Action (practice), and its space
b	Belief: a distribution over hidden states
$R_t(s, a)$	Reward at turn t ; non-stationary, rewritten at re-cognition
Φ	Re-cognition operator: $R_{t+1} = \Phi(R_t, \tau_t)$
F	Variational free energy
$W = (w_{ij})$	Coupling matrix: fraction of value propagating $j \rightarrow i$
$\rho(W)$	Spectral radius of W ; governs persistence
$R = (I - W)^{-1} - I$	Resolvent: total return matrix; R_{ii} is recyclability
v	Perron vector: stationary value profile; sets the baseline
r_i, \hat{r}_i	Actual and coupling-based-baseline return to generator i
$\theta_i = r_i/\hat{r}_i$	Normalised return to generator i
g	Sample skewness of $\{\theta_i\}$: the injustice statistic
x	Intensity of the relation's living activity
$r(x), \mu$	Regeneration rate and loss rate
x^*	Interior fixed point (threshold or living attractor)
φ_A, φ_B	Per-turn holonomy (phase) accruing to each party
σ	Skew of the return distribution; $\sigma_c = -1/\kappa$ is critical

B. Formal Sketches

This appendix records, in compressed form, the formal apparatus to which the main text points. The sketches are not validated models, and they are offered under the operational concession that governs the paper: each is a structured proxy whose use is operational, and none reaches the unsymbolised value it proxies. Three cautions, stated at the close, apply to all of them.

B.1 Appraisal as inference on a partially observable process

The basal appraisal of §5 is formalised as a partially observable Markov decision process whose reward function is non-stationary, and the non-stationarity is shown to be the decision-theoretic form of the absence of a fixed meta-value-grammar.

Table 8: Key concepts introduced or employed by the paper.

Concept	Statement	Section
Lifecycle as a real cycle	The shared life as a self-sustaining cyclic movement whose persistence conditions the relation's existence	§6
Operational concession	The deliberate adoption, where assessment is required, of a structured proxy known not to reach the unsymbolised value	§2.3
Basal vs explicit evaluation	Continuous unconscious appraisal (inference on a hidden state) vs deliberate instrumented measurement	§5.4
Expected recyclability	The probability that a contribution is met by a regenerating response; proxies the cycle's life	§10.3.1
Coupling-based baseline	The return the coupling structure alone would assign (the Perron-vector profile)	§10.3.2
Skew of return (injustice fingerprint)	The skewness of normalised return: a structured proxy for exploitation, orthogonal to the mean	§10.3.3
Foreclosure of unfolding	The concentration in one party of undertakings abandoned on account of the relation	§10.5
Three regimes	Flourishing spiral, catastrophic cycle, extinction, fixed by persistence and phase	§13
Justice as internal condition	Justice is the internal condition of the flourishing spiral, not a constraint upon it	§13.6
Genuine vs forged spiral	A persisting, high-satisfaction cycle may be catastrophic beneath the aggregate	§11.1
Cultivation vs legislation (养而不宰)	Cultivation guides the habit-forming dynamics; legislation possesses it	§9.2
Preservation of betrayability	A habit is cultivated insofar as its continuance remains a renewed joint choice	§9.3

The process. Let $s \in S$ be the hidden state of the relation, not directly observable; let $o \in O$ be the observation, the lived sensory and habitual fabric, related to the state by an observation model $P(o | s)$; let $a \in A$ be the action, the practice. The state evolves by a transition model $P(s' | s, a)$. The agent does not access s but maintains a belief $b \in \Delta(S)$, a distribution over states, and updates it on each observation by the Bayes filter

$$b'(s') = \frac{P(o | s') \sum_s P(s' | s, a) b(s)}{\sum_{s'} P(o | s') \sum_s P(s' | s, a) b(s)},$$

choosing actions on the belief b rather than on the inaccessible s . The belief is the formal correlate of the parties' superposed, non-definite sense of the relation's state (§5.2), and its updating is the basal evaluation that runs through every moment of the cycle (§6.1).

The non-stationary reward, and the absence of a meta-grammar. A standard process maximises the expected discounted sum of a fixed reward $R(s, a)$, representing the good to be secured. The relational process has no fixed reward: what the parties are to secure, the good of the relation, is itself reconceived at the moment of re-cognition (§12). Formally, the reward is indexed by the turn t of the cycle, $R_t(s, a)$, and the re-cognition that closes turn t produces

the reward R_{t+1} of the next turn as a functional of the turn’s trajectory,

$$R_{t+1} = \Phi(R_t, \tau_t),$$

where τ_t is the trajectory of beliefs, actions, and observations over turn t and Φ is the recognition operator. The process thus optimises an objective that its own running rewrites. There is no fixed terminal reward toward which the whole converges, and no meta-reward R^* governing the sequence $\{R_t\}$ from outside, since Φ is itself reconfigured by the trajectories it processes; this is the decision-theoretic form of the thesis that there is no fixed meta-value-grammar (§5.2), the value function occupying the place that the prior paper kept empty.

Active inference and the imperative to keep inferring. On the free-energy formalisation (§5.3), the agent does not maximise reward but minimises variational free energy, an upper bound on the surprise of its observations. Writing $q(s)$ for the agent’s recognition density over states and $p(o, s)$ for its generative model, the free energy is

$$F = \mathbb{E}_{q(s)}[\log q(s) - \log p(o, s)] = \underbrace{D_{\text{KL}}(q(s) \parallel p(s \mid o))}_{\text{inference gap}} - \log p(o),$$

minimised over q by perception, which closes the inference gap, and over a , through $p(o)$, by action, which makes observations conform to expectation. The agent maintains itself, holds itself away from the dispersed states that would dissolve it, exactly by continuing to minimise F , that is, by continuing to infer and to act. The cessation of this activity is, formally, the agent’s ceasing to resist the growth of free energy, equivalently the dispersion of its states toward the high-entropy distribution that is its dissolution. Transposed to the relation, the continued minimisation of free energy is the continued appraisal and practice by which the relation maintains itself (§6.2), and its cessation is the decay toward the terminal rest the paper names extinction (§13.4). The imperative to keep inferring is, on this formalisation, the imperative to keep the relation in existence, written as the minimisation of a free-energy functional.

B.2 The justice of the value cycle: a spectral formalisation

The assessment of justice in §10.3 is formalised here through the propagation of value on the relational network and the spectral analysis of the propagation operator, in a manner that connects the present account to the branching-process formalisation of generative recursion developed elsewhere in the author’s work.

The network and the propagation operator. Let the relation be represented by a finite directed weighted graph on the set of generators $N = \{1, \dots, n\}$, the parties and the coupled others. The coupling is encoded in a non-negative matrix $W = (w_{ij})_{i,j \in N}$, where $w_{ij} \geq 0$ is the fraction of value present at node j that propagates, in one step of circulation, to node i . The column sums satisfy $\sum_i w_{ij} \leq 1$ for every j , the deficit $1 - \sum_i w_{ij}$ being the fraction of value at j that leaves the network at that step, lost to neither party. A unit of value generated at node

j and circulating for one step yields the vector We_j , where e_j is the j th standard basis vector; circulating for k steps yields $W^k e_j$. Because W is sub-stochastic and non-negative, its spectral radius satisfies $\rho(W) \leq 1$, and when value leaves the network at some node the inequality is strict, $\rho(W) < 1$, which guarantees that the Neumann series below converges.

Total return and recyclability. The total value that returns to each generator, accumulated over all steps of circulation, is given by the resolvent

$$R = \sum_{k=1}^{\infty} W^k = (I - W)^{-1} - I,$$

which converges precisely when $\rho(W) < 1$. The entry R_{ij} is the total value returning to i from a unit generated at j , and the diagonal entry R_{ii} is the total value returning to the generator i itself, the quantity §10.3.1 called recyclability. The spectral radius $\rho(W)$ is the formal correlate of the threshold of §10.3.1: as $\rho(W) \rightarrow 1$, the resolvent diverges and the cycle of value sustains and amplifies itself, while a small $\rho(W)$ corresponds to a cycle in which value is rapidly lost, winding down toward the extinction of §13.4. The persistence of the cycle is thus governed by the leading eigenvalue of the propagation operator.

The Perron vector and the coupling-based baseline. When W is irreducible, the Perron–Frobenius theorem guarantees a unique positive eigenvalue $\rho(W)$ of largest modulus, with a positive right eigenvector v , the Perron vector, satisfying $Wv = \rho(W)v$. The Perron vector gives the stationary relative distribution of value across the network under repeated circulation: it is the profile of value-holding the network tends toward, independent of where value is generated. The Perron vector furnishes the coupling-based baseline of §10.3.2: the baseline expected return \hat{r}_i to generator i is the return that the coupling structure alone, through its stationary profile v_i , would assign to i . A relation whose returns track the Perron vector is one whose distribution of value is governed by the coupling and by nothing else; departures from it are the object of the justice assessment.

Concentration and the spectral signature of domination. The shape of the Perron vector is itself a structural datum. A Perron vector close to uniform describes a network in which value circulates broadly and returns are distributed across the generators; a Perron vector concentrated on one node describes a network in which value accumulates at that node under circulation, the structural form of a relation organised around the enrichment of one party. The concentration of the Perron vector, measured for instance by its participation ratio $(\sum_i v_i)^2 / \sum_i v_i^2$ normalised by n , is accordingly a spectral signature of the network’s tendency toward domination, prior to and independent of the actual returns: a relation may be structurally disposed toward the concentration of value by its coupling alone, and the Perron vector reveals this disposition. This is the point of contact with the analysis of background-independence and concentrated control developed in the author’s formal work, where the concentration of the Perron vector distinguishes a democratic from a dominated generative structure.

The skew statistic and its test. Let r_i be the actual return to generator i over the period of assessment, estimated from the value circulating in the relation, and let $\hat{r}_i = cv_i$ be the coupling-based baseline, c a normalising constant. Define the normalised return $\theta_i = r_i/\hat{r}_i$, so that $\theta_i = 1$ is the return the coupling alone would assign. The justice of the cycle is assessed through the distribution of $\{\theta_i\}_{i \in N}$, and specifically through its sample skewness

$$g = \frac{\frac{1}{n} \sum_i (\theta_i - \bar{\theta})^3}{\left(\frac{1}{n} \sum_i (\theta_i - \bar{\theta})^2\right)^{3/2}}.$$

The null hypothesis of an unbiased cycle is that the θ_i are exchangeable about their mean, so that the population skewness is zero and no generator is systematically favoured or disfavoured beyond the coupling. The alternative is a significant negative skew, $g < 0$ with the lower tail occupied by a distinguished generator, characteristically the bearer of the sustaining labour. Under the null, the sampling distribution of g may be obtained by permutation, since exchangeability makes all assignments of the observed returns to the generators equally likely; the test rejects when the observed g falls below the permutation quantile. The power of the test increases with n , with the magnitude of the under-return, and with the precision of the estimated returns, and is limited in the intimate case by the smallness of n , which is why the measure is most informative when the coupled network, including family and the wider sustaining chain, is taken into account rather than the dyad alone.

Standing of the formalisation. The formalisation requires assumptions not discharged here: that the propagation is adequately linear and one-step Markov, so that W and its powers capture the circulation; that W is estimable, which requires the assignment of value to acts and its tracing through the network, the substantial empirical problem of §10.3.4; and that W is approximately stationary over the period of assessment. Under these assumptions the justice of a relation's value cycle is, in principle, a testable hypothesis about the skewness of normalised return against a Perron-vector baseline, and the persistence of the cycle is governed by the spectral radius of the propagation operator. The formalisation is offered as the form such an assessment would take, under the operational concession, and not as a validated instrument.

B.3 The three regimes: a minimal dynamical model

The regimes of §13 are formalised here in a minimal dynamical model, offered as a structural analogy under the standing qualification (§4) that the law of a relation is itself reconfigured by what it generates, so that no fixed system captures it in full.

State variables and dynamics. Let the state of the relation be summarised by a scalar $x \geq 0$, the intensity of the relation's living activity, the rate at which value is generated, circulated, and returned. Let the dynamics be

$$\dot{x} = x(r(x) - \mu),$$

where $r(x)$ is the per-unit regeneration of activity, the recyclability of §10.3.1 expressed as a rate, and $\mu > 0$ is the rate of loss, the attrition the relation suffers absent regeneration. The factor x encodes that activity regenerates only where activity is present, so that $x = 0$, the cessation of all relational activity, is always a fixed point.

Fixed points and the existence of the living regimes. The fixed points are $x = 0$ and any $x^* > 0$ with $r(x^*) = \mu$. Suppose r is increasing then saturating, $r(0) = r_0$ and $r(x) \rightarrow r_\infty$ as $x \rightarrow \infty$, with $r_0 < r_\infty$, capturing that a relation with more living activity regenerates value more readily, up to saturation. Then:

- if $r_\infty < \mu$, the only fixed point is $x = 0$, which is stable: every relation decays to extinction, since loss exceeds regeneration at every level of activity;
- if $r_0 < \mu < r_\infty$, there is an interior fixed point $x^* > 0$; the linearisation $\partial_x [x(r(x) - \mu)]|_{x^*} = x^* r'(x^*) > 0$ shows x^* is unstable and $x = 0$ stable when r is increasing through μ from below, giving a threshold (an Allee-type effect): relations beginning above x^* sustain themselves and those below it decay to extinction;
- if $r_0 > \mu$, the fixed point $x = 0$ is unstable and an interior stable x^* exists at the saturating branch: the relation sustains a living regime from any positive start.

The persistence of the cycle (§6.2) is thus the condition $r_0 > \mu$ or a start above the threshold x^* ; its failure is the decay to the fixed point $x = 0$, which is extinction (§13.4).

Phase, and the flourishing versus catastrophic regimes. Persistence fixes whether the relation lives; a second variable fixes the phase it accumulates. Let φ be the per-turn holonomy, reckoned per party, and in the two-party case let φ_A, φ_B be the phases accruing to A and B . These are governed by the distribution of return: writing σ for the skew of the return distribution (§10.3.3), with $\sigma = 0$ symmetric and $\sigma < 0$ skewed against B ,

$$\varphi_A = \alpha(x^*)(1 + \kappa\sigma), \quad \varphi_B = \alpha(x^*)(1 - \kappa\sigma),$$

for positive constants α, κ , so that a symmetric return ($\sigma = 0$) gives both parties the same positive phase, while a skew against B ($\sigma < 0$) raises φ_A and lowers φ_B . The flourishing spiral (§13.2) is the persisting regime with $\varphi_A, \varphi_B > 0$; the catastrophic cycle (§13.3) is the persisting regime with some $\varphi_i < 0$, which by the above occurs when the skew is severe enough that $\kappa|\sigma| > 1$, driving φ_B negative while the relation persists and φ_A , and hence a satisfaction aggregate weighted toward A , remains positive. This is the formal form of the central claim (§13.6): a positive phase for all parties requires $\kappa|\sigma| < 1$, that is, a return not severely skewed, so that justice (small σ) is the internal condition of the flourishing spiral.

Bifurcation. The passage between regimes is a bifurcation in the parameters (μ, σ) . As μ rises past r_∞ , or as a relation near the threshold x^* is perturbed below it, the living regime loses stability and the relation decays to extinction: this is a saddle-node bifurcation in x , the

interior fixed point and the basin of the living regime annihilating as the parameter crosses its critical value, which is the dynamical form of the punctuated collapse the main text describes (§13.5). As σ falls past the critical skew $\sigma_c = -1/\kappa$, the phase φ_B crosses zero and the relation passes, while persisting, from the flourishing to the catastrophic regime: this is a transcritical crossing in the phase variable, the relation's regime changing in kind at a threshold of skew reached, often, by the gradual compounding of a slight initial asymmetry, exactly as in the longitudinal case of §14. The two bifurcations, in μ and in σ , are the two ways a relation changes regime: the failure of persistence and the reversal of phase, the first governing the passage to extinction and the second the passage between the flourishing and the catastrophic cycle.

B.4 Three cautions

Three cautions apply to all of the foregoing. First, the structured quantities, the belief, the return distribution, the holonomy, are proxies for a value that is unsymbolised and that they do not reach; their use is operational, and their results are evidence and not measurement. Second, each model depends on assumptions not discharged here, the observation and transition models of the decision process, the propagation probabilities of the branching process, the parameters of the dynamical system; the sketches indicate the form a model would take and do not supply a validated one. Third, the unfolding of each party's own dynamics, which lies nearest the unsymbolised value, is the quantity these models least adequately capture, and its proxies, the rates of accomplished and foreclosed undertaking, are the most provisional of the structured quantities the paper employs. The formal apparatus is offered for what it makes visible, under these cautions, and not as a representation of the value it serves.

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