

Philosophy of Intimacy and Theory of Justice Series

Generative Relations

in Parenting and
Early Childhood Education

THEORY AND PRACTICE

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道生之，德畜之，物形之，势成之。

是以万物莫不尊道而贵德。

*The way gives them life, its power nurtures them,
things give them form, circumstance completes them.
Thus among the ten thousand things there is none
that does not honour the way and value its power.*

— Laozi, *Daodejing*, ch. 51

*Nemo enim est quisquam, qui sic amet,
ut non plus se quam alterum diligat.*

*There is no one who loves in such a way
as to hold himself dearer than the other.*

— after Cicero, *Laelius de Amicitia*

ἀρχὴ γὰρ λέγεται τὸ ἥμισυ εἶναι παντός.

The beginning is said to be half of the whole.

— Aristotle, *Nicomachean Ethics*, 1098b

致她——

For Her—

也致那些尚未到来的，
and for those who have not yet come,
他们将在我们不知道的关系中长成，
who will grow within relations we do not know,
而我们能给的，只是那个使生成成为可能的场。
and to whom we can give only the field
in which their becoming remains possible.

Abstract

This book treats childrearing and education as the domain in which the propositions of generative relational being become simultaneously visible, testable, and unavoidable. The child occupies a position the framework has so far addressed only obliquely. Where the framework's account of the subject presumes a party who has already been seen, who holds other relations elsewhere, and who therefore retains reserves against which any present relation can be measured, the child holds none of these, and the gaze now organising him is the same gaze that is constituting him. Every proposition the framework has established about degradation, symbolic closure, absorption, and revisability was formulated for a subject with reserves, and this book undertakes their re-derivation for a subject without them.

The argument proceeds through four movements. The ontological movement establishes what the framework commits itself to concerning what a child is: relational primacy in its transcendental rather than genetic sense, generativity as structural evolution within a relationally constituted space of possibility, and the subject as continuous formation within relational generation. It reads the major theories of development for their ontological presuppositions and locates in each the point at which the relation ceases to constitute and begins merely to transmit. The diagnostic movement examines asymmetry as a constitutive rather than remediable feature of the rearing relation, the absorption of the power that asymmetry continuously generates, and the forms degradation takes when absorption ceases: the symbol that governs both the mode of contact and the rules by which evidence about itself will be read; the gaze whose singularity renders recognition zero-sum irrespective of material abundance; and the projection of a childhood onto a unified optimisable space. The explanatory movement develops the co-generation of knowledge, the relational form of authority and the conditions of its maintenance, and the intergenerational transmission of grammar within families and educational traditions.

The fourth movement carries the framework into practice along two distinct lines. The generative development of human capacities treats perception, movement, language, concrete and formal operation, relational capacity, self-regulation, normativity, and aesthetic sensibility, each through a common architecture: what the developmental literature establishes, what that account presupposes, what relational conditions constitute the capacity's space of possibility, what closes it, and what follows for practice. The practice of relation treats the acts by which a relation itself is conducted, including the restoration of response, the shared third, the maintenance of channels of revision, rupture and repair, and the operative forms of household governance. A closing movement states the questions the book frames without resolving, submits the account to a projection test against existing theories, and sets out the research programme that follows.

Throughout, the book declines the form of advice. Its practical weight is earned by describing what certain acts do, and the wall between dynamical description and normative justification is held with particular care in this domain, where the sentence that a measure serves a child's future arrives with unusual sincerity and occasional truth.

Keywords: generative relational being; childrearing; the immature subject; relational asymmetry; the absorption of power; symbolic closure; revisability; the generation of capacities; educational practice.

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Preface

A book about raising children, written at this length and in this register, invites a question before it invites a reader. The subject is among the most thoroughly written about in any language, most of what is written about it is practical, and a work that declines to be practical while running to the length of a treatise owes an account of itself.

The account is that childrearing is where a certain set of philosophical propositions becomes at once visible, testable, and impossible to set aside.

The propositions concern how a subject comes to be. They have been developed in a series of studies conducted over some years, addressed to questions of justice, intimacy, recognition, and the conditions under which a relation continues to generate rather than settling into repetition. Those studies took their cases from politics, from economics, from the analysis of conflict, and from the long literature on what human beings owe one another. In every case the subject under discussion was an adult, and the adult was assumed to arrive at the relation already formed. What such a subject does when a relation degrades, what resources it draws on, what it can refuse and what it must endure, all rest on that assumption without stating it.

A child is the case where the assumption fails. The child arrives at the relation unformed, and the relation is what forms the child. Whatever the framework has established about degradation, about the symbol, about recognition and its withdrawal, was established for a party who had somewhere else to stand. A child has no elsewhere. Every proposition therefore has to be derived again under conditions the original derivations did not contemplate, and the results are not the same.

That is the reason for the book, and it should be said plainly that the reason runs in one direction rather than the other. This is not the application of a framework to a domain. It is the domain in which the framework either survives or is found wanting, and a reader who concludes at the end that it has been found wanting will have read the book correctly.

A second matter needs stating at the outset, because it governs how everything after is to be read.

Practices of rearing differ across places, across periods, and across the material circumstances of the households that conduct them. Any book that surveys such differences faces a temptation, and the temptation is nearly irresistible: to take the arrangement its author knows best as the neutral case and to describe the others as departures from it. The temptation operates whether the author's own arrangement is treated as the standard of health or as the object of self-criticism, since both moves grant it the central position from which the others are measured.

This book proceeds from a different commitment. A practice of rearing is a response to conditions. The conditions include what work the adults of a household do and where they do it, what the household must secure and what threatens it, how a society allocates the positions its young people may occupy and by what procedure, what the state provides and withholds, and what the accumulated history of a place has made available to be thought. Practices that

appear from outside to be excessive, or indulgent, or harsh, or negligent are, in the ordinary case, intelligible responses to arrangements the observer has not troubled to reconstruct. Reconstructing them is prior to assessing them, and the reconstruction is difficult enough that this book will frequently decline the assessment.

Two consequences follow and both are restrictions the book accepts.

The first is that evaluative vocabulary is withheld from national and cultural practices throughout. Where a practice is described, it is described together with the conditions in which it stands. Where the framework's own criterion is applied, the application is stated as conditional on that criterion, which is a philosophical commitment this book argues for and which a reader may decline. What will not be found here is the claim that some society raises its children wrongly.

The second consequence is more uncomfortable and is worth facing directly. A book written from inside a moment cannot see that moment's slow variable. This is not modesty; it is a proposition the book itself argues for at length, and it applies to the book. The arrangements now current, in every country, are of unknown historical standing. Which of them are transitional responses to a passing configuration, which are stable, and which are the early form of something not yet recognisable are questions that cannot be settled from within. An author who claimed otherwise would be claiming an observation point that the argument of this book denies to anyone.

This book is addressed to two readers, and they will use it differently.

The first is a reader who works on these questions professionally: a philosopher, a developmental researcher, a scholar of education or of the family. For that reader the book's weight sits in its earlier parts. The survey of theoretical traditions and the taxonomy that organises it, the treatment of what the two available research methods can and cannot establish, the historical formation of the developmental theories and their circulation between cultures, and the analysis of rearing practice as a response to material conditions are all conducted at length and with the apparatus such a reader will expect. The ontological chapters that follow state the position the whole book rests on. A reader of this kind may find the later parts of the volume the least interesting, and is entitled to.

The second is a reader who raises children or works with them: a parent, a teacher, someone responsible for an early-childhood setting. For that reader the weight sits in the later parts. The generation of the individual capacities, taken one at a time and each treated at length, is the longest single part of the book. The chapters on practice that follow it address what particular acts do rather than what should be done, which is a distinction that will matter to such a reader more than it might appear. The part on method and empirical programme, which proposes ways a relation might be observed and assessed, is written so that someone conducting the observation can use it. A reader of this kind may find the earlier parts heavy going, and is entitled to skip forward and return.

Both routes are legitimate and the book is arranged so that either can be taken. The later parts carry enough of what precedes them to be intelligible on their own, and the reader who begins there will find the reasons behind what is claimed at the cross-references rather than in a summary. What such a reader loses is not comprehension but warrant: the practical material will be usable and the grounds on which any of it should be believed will be somewhere else

in the volume.

One thing should be said plainly, since addressing two readers can be a way of serving neither. The chapters do not adjust themselves to whoever might be reading. Nothing in the later parts is simplified on the assumption that a practitioner is there, and nothing in the earlier parts is elaborated to satisfy a specialist. The difference between the two halves of this book is a difference of subject matter, and the argument is conducted at the same level throughout.

One further note. This book stands within a larger body of work and does not require it. That work is organised around a single proposal, which may be stated here in the form it takes in the foundational study: Generative Relational Being is a theory of how subject, meaning, value, creation, and normativity co-emerge through generative relational processes. The five named terms co-emerge, and none is prior to the others. Extensions of the proposal into particular domains have been developed separately, among them an epistemology, an economics, a theory of governance, and an account of historical change, and the present volume draws on several of these at the points where its argument requires them.

The propositions this book uses are stated where they are used, in the form the argument here needs, and a reader who has read nothing else will find nothing missing. Readers who wish to see them developed in their own right, with the cases and objections that shaped them, will find the relevant studies cited at the points where they bear. The relation between this volume and that corpus is that the corpus supplied the questions and this volume tests them where the testing is hardest.

A word about the standing of all of it. The framework is historically dialectical, and this is a commitment about its own status rather than only about its subject matter. What can be known and what can be done are both finite within the historical frame in which they occur. An account produced in such a frame is answerable to conditions its author did not choose and could not fully survey, and revision is therefore expected rather than conceded under pressure. The propositions in this book are numbered so that they can be located, disputed, and amended. A reader who amends one has done what the framework asks.

Part I

The Position of the Question

Chapter 1

The Ontological Premises of Theories of Development

The Work of This Chapter

This chapter asks what the major accounts of childhood presuppose about what a child is, prior to and beneath what they claim about how children develop.

It contributes the ground on which the rest of the book stands. The survey establishes that accounts differing on nearly everything converge on one commitment, that the commitment is substantive, and that it is not refutable by evidence.

[[Chapter ?? ch:commitments](#)] constructs the alternative; the whole of Parts II through X depends on that construction, and the construction is intelligible only against what is established here. The chapter also fixes the book's method and states the sense in which philosophical, historical, cultural, and empirical work belong together in one volume.

It does not assess the empirical adequacy of any theory surveyed. Those assessments exist, they have been conducted by people better placed to conduct them, and this book adds nothing to them. Nor does it trace how each account arose in its own historical and cultural conditions, which is the work of [[ch. ?? ch:historical](#)], or how accounts travel between cultures, which is the work of [[ch. ?? ch:circulation](#)].

The chapter closes by stating why a further framework is required, in the form of the tensions the surveyed literature runs into and cannot resolve from its own resources, together with the limitations of what is offered in their place.

The reader should carry forward four things: the four objects a theory of childhood may take, the two methodological traditions available for studying them, the location question, which asks of any account what it takes the bearer of a developing property to be, and the proposal that what develops in rearing is a relational system rather than a child.

1.1 The Location of the Premise

1.1.1 The Order of Commitment

Every account of how a child develops carries, beneath its findings and prior to them, a commitment concerning what a child is. The commitment is rarely argued. It is more often inherited, absorbed from the discipline in which the account was formed, and it does its work by determining in advance what will count as a phenomenon requiring explanation. A theory that takes the child to be a solitary constructor of knowledge will find, in a room containing a child and an adult, a child who is constructing and an adult who is supplying material. A

theory that takes the child to be a node in a system of transmission will find, in the same room, a transfer proceeding at some rate. Neither theory is looking away from anything. Each is seeing what its commitment has equipped it to see, and the commitment was settled before the room was entered.

This ordering has a consequence that governs the present chapter. Disagreements between theories of development are ordinarily conducted at the level of findings, and at that level they are frequently resolvable. Whether infants track intentions at nine months or at fourteen is a question that admits of evidence, and evidence has narrowed it. Whether a child's vocabulary growth is better modelled by a threshold or by a continuous accumulation is likewise a question with an answer that data can approach. Disagreements of this kind are the ordinary business of a productive science, and the productivity is real. What such disagreements leave untouched is the layer at which the theories agree without having noticed that they agree, and the agreements at that layer are what this chapter takes as its object.

Consider the difficulty in its concrete form. A researcher who holds that development is the maturation of individual capacities and a researcher who holds that development is the internalisation of social forms will design different studies, code different variables, and reach different conclusions. They will also, in the ordinary case, share the assumption that there exists a child whose capacities are being matured or whose internalisation is proceeding, and that this child is the thing about which the theory is a theory. The assumption is so nearly universal in the field that stating it can seem pedantic. The claim this book will develop is that the assumption is substantive, that a serious alternative to it exists, and that a great deal follows from the choice between them.

An objection presents itself immediately, and it deserves an answer before the survey begins. One might hold that ontological commitments of this kind are idle, that they float above the empirical work without touching it, and that a researcher may hold any view whatever about what a child ultimately is while conducting perfectly sound investigations into what children do. There is something to this. A well-designed study of visual attention will produce the same numbers whether its author is a realist or an instrumentalist about the child, and the numbers will be worth having in either case.

The objection loses force at the point where the numbers must be interpreted, and it loses force entirely at the point where an instrument must be designed. An instrument is a decision about where a property resides. To measure vocabulary is to have decided that the vocabulary is the child's, held by the child, and countable in the child. To classify an attachment pattern is to have decided that the pattern characterises a dyad, that the dyad has a type, and that the type persists across the occasions on which it is assessed. These decisions precede the measurement and are not tested by it. A finding that a child's vocabulary has grown does nothing to confirm that vocabulary is the sort of thing a child has, because the finding was generated by an instrument that presupposed as much. The ontological commitment enters the empirical work at the moment the instrument is built, and it enters in a form that the instrument's own output cannot reach.

[**Chapter ?? ch:instruments**] returns to this in detail, and the question of what existing instruments locate their measured properties in becomes the organising question of the empirical part of the book. For the present it establishes the reason the survey that follows is conducted as it is. The theories examined in this chapter are examined for what they presup-

pose rather than for what they claim. Their claims have been assessed extensively by others, and this book has nothing to add to those assessments. Their presuppositions have received less attention, and it is at the level of presupposition that the book's own commitment differs from theirs.

One further point of method. The theories surveyed here are, without exception, serious achievements. Each identified a real structure, each generated research that has produced knowledge, and each remains in use because it continues to be useful. A survey conducted in order to clear the ground for a new proposal is under a temptation to find its predecessors wanting, and the temptation is worth naming so that it can be resisted. The finding this chapter reports is narrower and, if correct, more interesting than a general inadequacy. It is that each of these theories arrives at a particular boundary and stops there, that the boundary is in approximately the same place in every case, and that the location of the boundary is intelligible in terms of the ontological commitment each theory began from. What lies past the boundary is the subject of this book.

1.1.2 The Silence of the Premise

A commitment that is never stated is difficult to examine, and the difficulty is structural rather than accidental. The premises this chapter is after are silent in a specific sense. They are not hidden, in the manner of an assumption a theorist prefers to keep from view. They are not tacit in the manner of a background belief the theorist would acknowledge if asked. They are silent because the vocabulary in which the theory is conducted has already absorbed them, so that stating them would produce a sentence the theory's own practitioners would find either obviously true or barely meaningful.

An illustration makes the point better than a definition. Within the developmental literature it is ordinary to write that a child *has* a vocabulary of some size, *possesses* a theory of mind, *shows* secure attachment, or *lacks* inhibitory control. The verbs are unremarkable and no one attends to them. Each of them locates something. To have, to possess, to show, and to lack are all relations between a bearer and a property, and the bearer in every case is the child. A reader who paused over these verbs and asked whether the property might be located elsewhere would be asking a question the vocabulary is not built to receive. The question sounds, within that vocabulary, like a confusion about where things are.

The silence is therefore maintained by the language of the field rather than by any decision of its practitioners, and this has two consequences worth separating.

The first concerns how such a premise changes. A commitment held in the vocabulary of a discipline is not revised by argument directed at it, because the argument must be conducted in some vocabulary, and the available one already contains what the argument would question. Revision of this kind occurs when a new vocabulary becomes available and turns out to do work the old one could not, and it occurs slowly, and it is usually visible only afterward. This is a familiar pattern in the history of the sciences and there is nothing peculiar about developmental psychology in this respect.

The second consequence bears directly on this book's position. If the premises are held in the vocabulary, then a book proposing a different premise must supply a different vocabulary, and it must do so without the new terms collapsing into the old ones on first contact. The

risk is concrete. Words like *relation*, *relationship*, and *relational* are already in use throughout the developmental literature, and in that use they name a connection between parties who exist prior to the connection. A mother and an infant have a relationship; the relationship is a property of the pair; the pair consists of two individuals each with properties of their own. When this book says that a capacity is a stabilised relational structure, the sentence will be read, by default, as the claim that a capacity held by a child is influenced by the child's relationships. That reading is not the claim. It is the claim the existing vocabulary permits, and it is a claim the existing literature has already established at length and with better evidence than this book will offer.

[Chapter ?? ch:commitments] therefore does more work than an ordinary statement of premises. Its task is to make available a sense of *relation* in which the relation is prior to its terms, and to make that sense stable enough that the later chapters can use it without sliding back. Whether it succeeds is a question the reader is better placed to answer than the author, and the book's later arguments are hostage to the answer.

For the survey that follows, the silence has a practical implication. Each theory examined in the remaining sections of this chapter will be read for what its verbs locate. This is a narrow instrument and it will not settle any large question. What it does is bring into view the layer at which the theories agree, and that layer is where this book's disagreement lies.

1.2 The Taxonomy of the Field

1.2.1 The Four Objects

The accounts examined in this chapter are ordinarily discussed together, and discussing them together invites the assumption that they are answering one question in competing ways. They are not. Piaget's subject is the development of knowledge. Bowlby's is a bond and its disruption. Montessori's is the design of an environment in which teaching occurs. A comparison that places these three in a row and asks which is correct has already made an error, and the error is common enough in the applied literature to be worth naming before the survey begins.

Four distinct objects can be discerned, and most accounts address one of them.

The first is *what changes*. An account of development proper asks what is different about a child at one age and another, describes the trajectory, and proposes a mechanism for the movement along it. Piaget's stages, Vygotsky's general law, the growth curves of contemporary quantitative work, and the sequence descriptions that fill developmental textbooks all belong here. The object is a course of change and the question is what governs it.

The second is *what a mind is*. An account of child psychology asks about the organisation of a child's mental life, and it can do so without any commitment about how that organisation came to be. Core knowledge research describes what an infant represents. Theory-of-mind research describes when a child attributes belief. Psychoanalytic accounts describe a structure of wishes, defences, and objects. The object is a mental organisation and the question is what it consists of.

The third is *what an adult does*. An account of rearing addresses the conduct of the person raising a child. It may be derived from a developmental theory, and often is, but its object is different: the adult's action, its warrant, and its consequences. Attachment-derived sensitiv-

ity guidance, behaviourist contingency management, and the whole of the popular parenting literature belong here. The object is a practice and the question is how to conduct it.

The fourth is *what an institution does*. An account of early education addresses arrangements that are collective, professionalised, and organised around a curriculum however loosely specified. It faces questions the other three do not: what a group of children makes possible and forecloses, how a practitioner's attention is divided, what a public system owes and to whom. Montessori's method, the Reggio Emilia approach, and national early-years frameworks belong here. The object is an institutional arrangement and the question is how to design it.

The distinctions matter because the borrowing between them is constant and mostly unmarked. A finding about what changes is taken to license a claim about what an adult should do. A description of what a mind consists of is taken to settle a question about institutional design. Each borrowing may be legitimate and each requires an argument, and the argument is ordinarily not supplied.

An instance makes the difficulty concrete. Attachment research establishes an association between caregiver sensitivity and a classification of infant behaviour, which is a finding about what changes and under what conditions. Considerable rearing advice has been derived from it. The derivation requires at least three further premises: that the classification names something worth having, that sensitivity as operationalised in research corresponds to what an adult can deliberately do, and that a practice aimed at producing the classification produces the same thing the research measured. None of these is obviously true, the third is doubtful for reasons this book takes up at length, and the advice is nonetheless issued as though the research had established it.

Proposition 1.1. *A theory addressing one of the four objects supplies no claim about the others without a further argument. The transfers are ordinarily made without one, and much of what circulates as evidence-based rearing advice consists of such transfers.*

The taxonomy also locates this book. Its primary object is the third, which is the conduct of rearing, and it treats the first as the ground that conduct operates on. It says a great deal about the fourth and offers no institutional design. On the second it takes a position, which is that a mind's organisation is not the sort of thing that can be described without describing the relations in which it stands, and the position is argued in [**Chapter ?? ch:commitments**] rather than assumed here.

1.2.2 The Methodological Divide

A second axis cuts across the first, and it divides the field more deeply than any disagreement about content. The question is what would count as knowing something about a child.

Two traditions supply answers.

The first holds that a claim earns its standing by contact with controlled observation. A construct is defined so that it can be measured, a measurement procedure is specified so that others can repeat it, variation is examined against variation, and inference is disciplined by what the design permits. This is the tradition that produced the Strange Situation, the false-belief task, the longitudinal cohort, and the randomised trial of an early-years intervention. Its achievements are not in question anywhere in this book. It has settled matters that speculation had left open for centuries and it continues to settle them.

The second holds that a claim earns its standing by illuminating what is already before us. It proceeds through the analysis of concepts, the reading of texts and traditions, the historical reconstruction of how a practice came to take its form, and the careful description of experience. This is the tradition of the philosophical treatment of education, the ethnographic account of a household, the historian's account of how childhood came to be conceived as it is, and the practitioner's articulate description of what happens in a room. It supplies most of the categories the first tradition then measures.

Each carries a defect, and the defects are worth stating precisely because a great deal turns on their being different in kind.

The empirical tradition cannot cross from what is to what ought to be. No accumulation of findings about what produces a given outcome establishes that the outcome should be produced, and the gap is not a temporary limitation to be closed by better studies. It also estranges its object, and this is the more insidious difficulty. A construct is measurable to the extent that it has been narrowed, the narrowed construct then stands in for what was originally of interest, and the substitution is invisible from inside the practice. What began as a question about whether a child is flourishing becomes a question about a score, and the score is what gets reported, compared, and optimised.

The traditionalist tradition cannot establish which of its accounts is correct. Two careful descriptions of the same household may differ, both may illuminate, and there is no procedure that decides between them. Its claims are therefore difficult to falsify, and a tradition whose claims cannot fail has no mechanism for discovering that it has gone wrong.

The two defects do not repair one another, and it is important to see why. Empirical work cannot cure unfalsifiability, because the is-ought gap means that data never adjudicates a claim about what matters. Traditionalist work cannot defeat Hume's problem, because it has no more access to necessary connection than measurement does. A book that presented the two as complementary halves of a complete method would be claiming something false.

What the pairing does instead is constrain each other's overreach. Empirical discipline keeps conceptual analysis tied to phenomena it must account for. Conceptual and historical work keeps empirical practice from mistaking its proxies for the thing, which is precisely the estrangement named above. Neither closes, and the honest form of inquiry into a subject of this kind is a dialectic between two methods that each remain open. §1.26.4 returns to this and states the position the book adopts.

1.2.3 The Coordinates of the Survey

The remaining sections of this chapter examine nineteen bodies of work. Table 1.1 places each on the two axes established above, and the table is given before the survey rather than after it so that the reader knows at each point what kind of thing is being examined.

Three features of the table are worth remarking before the survey proceeds.

The accounts that address what an adult should do are, without exception, extensions of accounts that originated elsewhere. Attachment theory was a theory of a behavioural system before it was a source of advice about sensitivity. Behaviourism was a theory of learning before it was a method of managing behaviour. The formation traditions are the exception that confirms the pattern, since they began as pedagogy and have never produced a developmen-

Account	Primary object	Method	Section
Constructivism	The course of change	Traditionalist, then empirical	§1.3
Sociocultural	The course of change	Traditionalist	§1.4
Shared intentionality	The course of change	Empirical	§1.5
Core knowledge	A mind's organisation	Empirical	§1.6
Dynamic systems	The course of change	Empirical, formal	§1.7
Ecological systems	The surround of change	Empirical	§1.8
Attachment	The course of change; adult conduct	Empirical	§1.9
Psychoanalysis	A mind's organisation	Traditionalist	§1.10
Behaviourism	The course of change; adult conduct	Empirical	§1.11
Social learning	The course of change	Empirical	§1.12
Transactional	The course of change	Empirical	§1.13
Neural	The physical substrate	Empirical	§1.14
Social reproduction	The distribution of position	Both	§1.15
Warranted practice	Adult conduct; intervention	Empirical	§1.21
Educational philosophy	Adult conduct; institutional design	Traditionalist	§1.19
Disciplinary analysis	The apparatus of knowledge	Traditionalist	§1.20
Parenting styles	Adult conduct	Empirical	§1.17
Stage accounts	The course of change	Both	§1.18
Formation traditions	Adult conduct; institutional design	Traditionalist	§1.22

Table 1.1: The coordinates of the survey. Where two objects are listed, the account originated with the first and was extended to the second, and the extension is examined in the relevant section.

tal theory of their own. No body of work in this survey began by asking what a rearing adult should do and built its account from there.

The two methodological traditions are not evenly distributed across the objects. Accounts of what changes are predominantly empirical; accounts of what an adult or an institution should do are predominantly traditionalist. This is not accidental and it is not a criticism of either. It reflects that trajectories admit measurement and that conduct requires categories measurement does not supply.

The single account that spans both methods is the one that founded the modern field. Piaget's early work is conceptual analysis conducted through clinical interviews of his own children, and the research programme that followed it was quantitative and international. [[ch. ?? ch:historical](#)] returns to what that transition cost.

1.3 The Constructing Solitary

Piaget's achievement ([Piaget, 1952, 1954](#)) was to establish that a child's errors are systematic. Before him it was possible to treat what children say about the world as an incomplete version of what adults say, deficient in the way a partial copy is deficient. After him this became difficult to maintain. The child who judges that the taller glass holds more water is not failing to perform an operation an adult performs. The child is performing a different operation, and performing it consistently, and the consistency is the finding. A structure was there to be described, and Piaget described a great deal of it.

The description rests on a mechanism, and the mechanism is where the premise sits. Knowledge, on this account, is built by a subject acting on objects. The subject assimilates what it encounters to the schemes it already has; where assimilation meets resistance, the schemes accommodate; and the alternation of these two, driven by the disequilibrium that resistance produces, carries the subject from one stage of organisation to the next. Equilibration names the process by which the whole thing keeps moving.

Two features of this mechanism deserve attention. The first is that it is genuinely a mechanism, specified well enough to generate predictions about what a child at a given stage will and will not do, and this specification is why the theory produced fifty years of productive research. The second is that everything in it happens on one side. The schemes are the subject's. The assimilation is performed by the subject. The disequilibrium is a state of the subject. The accommodation is a change in the subject's structures. The object contributes resistance, and resistance is a limit rather than a contribution. Nothing in the mechanism requires a second subject to be present at all.

This is not an oversight, and reading it as one would miss what is interesting. Piaget was explicit that the child constructs knowledge through activity, and the explicitness was a real advance over the alternatives available to him, which located knowledge either in innate endowment or in impressed experience. Locating it in the child's own operation on the world was the move that made development into a process with an internal logic. The cost of the move is that the logic is internal to one party.

Where, then, do other people enter? They enter as a special class of object. Another child is an object that resists in complicated ways, and the resistance is instructive: peer disagreement produces disequilibrium, disequilibrium drives accommodation, and this is the standard Pi-

agetian account of how egocentrism declines. Social interaction is thereby granted a real role. The role it is granted is the role of a particularly effective supplier of resistance.

Consider what this account can and cannot state. It can state that a child who argues with peers will decentre sooner than a child who does not, and this is a substantive claim with empirical support. It cannot state that the child's capacity to hold a position at all is generated in the arguing, because the capacity is a scheme, schemes belong to the child, and the arguing supplies the occasion for their reorganisation. The child who enters the argument and the child who leaves it are the same child with differently organised schemes. Something has happened to the child. Nothing has happened to a relation, because on this account there is no relation in the relevant sense, only two constructing subjects each undergoing its own equilibration in the presence of the other.

The verbs confirm the reading. The child *has* schemes, *acquires* conservation, *attains* concrete operations, *lacks* reversibility. Each verb locates the property in the child. The account is coherent, well specified, and locates everything it describes in one place.

Proposition 1.2. *On the constructivist account, another person functions as an occasion for the reorganisation of structures that belong to the child. The account has resources to describe what such an occasion produces in the child and no resources to describe what it produces between them.*

The boundary this reaches is worth stating precisely, because it recurs in every theory examined in this chapter. Piaget's mechanism explains how a structure held by a subject changes under encounter. It does not address the question of how there comes to be a subject holding structures, and it does not need to, because the constructing subject is the premise from which the mechanism starts. Development, on this account, is something that happens to a subject who is already there. The question this book takes as its own is the question of that subject's own generation, and it lies on the far side of the boundary Piaget's account establishes.

1.4 The Scaffolded Agent

Vygotsky (Vygotsky, 1978, 1986) arrives at the question from the opposite direction and reaches a position that resembles this book's more closely than any other in the chapter. The resemblance is what makes the section difficult, and the difficulty is worth taking slowly.

His central proposition is that the higher functions appear twice. They appear first between people, as an interpsychological event, and afterward within the child, as an intrapsychological one. Attention is directed by another before it is directed by the self. Memory is prompted by another before it is prompted by the self. What will become the child's own operation begins as an operation distributed across two people, and the child's acquisition of it consists in that distributed operation being taken inward. The general law of cultural development states this, and the statement is a departure from everything Piaget's account permits. On Piaget's account the social supplies occasions. On Vygotsky's it supplies the form.

The zone of proximal development follows from the proposition and is its practical face. What a child can do with assistance stands in a determinate relation to what the child will shortly do alone, and the gap between them is where instruction operates. A child assessed only on independent performance is assessed on what development has already completed. A

child assessed on assisted performance is assessed on what development is currently producing. The distinction reorganised educational measurement wherever it was taken seriously, and it remains among the most productive ideas the field has generated.

Note what has been granted. Vygotsky has located the origin of a psychological function outside the individual, in an exchange between individuals, and has made the individual's possession of that function a derivative fact. Function is prior in the interaction and posterior in the person. If a theory of relational generation is going to be constructed, this looks like the place it would begin.

The question is what the between-people event consists of, and this is where the account settles into a shape the present book cannot adopt.

Consider the standard scene. A child cannot solve a problem; an adult provides prompts, breaks the task into components, holds part of the structure while the child manages the rest; over repetition the adult's contributions withdraw; the child performs the whole. The scene is real and the description is accurate. Ask now where the function was, at each moment. Before the episode it was in the adult, who could solve the problem. During the episode it was distributed, with the adult holding a portion. After the episode it is in the child. What the episode accomplished was a transfer of location, conducted in stages, with the intermediate stages managed so that the child could take up successively more of what the adult was holding.

This is a description of transport rather than of production. What moved was something that already existed in complete form on one side of the exchange. The adult did not come to possess anything through the episode. The adult was the source. The exchange was asymmetric in a specific way: one party had it, the other did not, and afterward both do.

Two consequences follow, and neither is a defect within Vygotsky's own project.

The first is that the account cannot describe generation of what neither party held. A conversation in which a parent and a child arrive at something the parent did not previously possess is, on this account, difficult to place. It can be redescribed as the parent also having learned, which is true and which relocates the phenomenon back into two separate acquisitions. What it cannot be described as is a single event in which something came into being between them and was afterward available to both. The vocabulary of internalisation requires an original location.

The second consequence concerns what happens to the adult. Internalisation is a one-way operation, and a theory built on it has no term for the adult's transformation by the same episode that transforms the child. A parent who is changed by a child, and who is changed precisely through the exchange that is teaching the child, is doing something the account has no name for. This will matter a great deal later in the book, where the reversal of direction becomes the criterion distinguishing two kinds of stable asymmetry ([[ch. ?? ch:stability](#)]). For the present it identifies the boundary: internalisation runs from the competent to the developing, and a mechanism that runs in one direction cannot describe a relation in which the direction reverses.

Proposition 1.3. *Internalisation requires that what is internalised have a prior location. An account built upon it can describe the movement of a function from one party to another and cannot describe the generation of a function that neither party held.*

The verbs here are less uniform than Piaget's and the difference is instructive. Alongside the child who *acquires* and *internalises*, one finds a function that *appears* between people, and appearing is not a verb of possession. The vocabulary is reaching for something the mechanism does not supply. Vygotsky died at thirty-seven with the work in an early state, and it is entirely possible that the mechanism would have been developed further. What was left is a theory in which the social is prior in origin and the individual is where everything ends up.

One further observation, since it bears on how the remainder of this book should be read. It is common to treat any relational account of development as a variant of Vygotsky's, and the treatment is understandable given how much territory he claimed. The difference this book requires can be stated in one line. On the Vygotskian account the relation is the channel through which a function passes. On the account developed here the relation is what the function consists of, so that the function does not arrive anywhere and does not need to, and what stabilises is a structure rather than a possession. Whether that formulation can be made to do work is the question [**Chapter ?? ch:commitments**] takes up.

1.5 The Shared Intention

The sociocultural line did not end with Vygotsky, and its contemporary form differs from his in ways that bear directly on the question this chapter is pursuing. Two developments matter. Rogoff (Rogoff, 1990, 2003) reconceived learning as participation in the activity of a community rather than as the acquisition of what a community holds. Tomasello (Tomasello, 1999, 2019) proposed that the human capacity for culture rests on a specific and identifiable ability to share intentions with another, and assembled comparative evidence for the proposal that Vygotsky had no means of gathering.

Tomasello's line of argument runs through a comparison. A chimpanzee and a human infant are set the same instrumental problems and perform comparably on many of them. The divergence appears where a problem requires reading another's intention and joining it. An infant of twelve months points to inform, which is to say points in order to supply another with something the other wants and does not have. An infant follows a gaze to an object and then looks back at the adult, establishing that both are attending to the same thing and that both know this. An infant offers help unprompted to an adult who has visibly failed at something. These are not more sophisticated versions of what other primates do. They constitute a different organisation of the social, and Tomasello's proposal (Tomasello, 1999, 2019) is that this organisation is the precondition of everything cumulative in human culture.

Joint attention is its elementary form and deserves attention here because of how it is described. Two parties attend to a third thing, and each attends to the other's attending, and this mutual registration is what makes the situation joint rather than parallel. Tomasello's term for what emerges is a shared intentional state, and the term carries a real commitment: what is shared is not two matching individual states but a state whose subject is a plural. He writes of a joint goal that neither party holds alone.

This is a substantial move and it is worth marking how far it goes. A theory that admits states whose subject is plural has admitted something the accounts examined earlier cannot state. Piaget's disequilibrium belongs to one child. Behaviourist reinforcement history belongs to one organism. A shared intentional state, if the notion holds, belongs to a pair and to neither

of its members.

Rogoff's (Rogoff, 2003) contribution proceeds from a different direction and arrives nearby. Her observation, developed through work in Mayan communities and elsewhere, is that a great deal of what children learn is learned by being present at and gradually assuming a place within activities conducted for their own sake. A child grows into the practice of a household by doing progressively more of what the household does. Nothing is transmitted in any straightforward sense, because there is no episode in which one party holds a competence and conveys it. There is an activity, the child's participation in it deepens, and competence is the name for the deepened participation. Her rejection of the transmission model is explicit and it is one of the strongest such rejections in the developmental literature.

Both lines are closer to this book's concerns than anything examined so far. The question is what remains once the closeness has been granted.

Consider the shared intentional state first. Its status within the theory is that of a capacity, and the capacity is possessed. Tomasello's central empirical claim is that human infants have this ability and other primates do not, that it emerges on a schedule, and that its absence or delay characterises certain developmental conditions. The state is shared; the ability to enter such states is individual, is species-typical, and is the property of an organism. The theory's explanatory work is done by the second of these. When it explains why human culture is cumulative, the explanation runs through what humans can do, and what humans can do is a fact about human individuals.

The consequence can be stated exactly. Shared intentionality names a relation and grounds it in a disposition. Two parties enter a joint state because each is the kind of creature that can enter joint states. The relation is real, is genuinely irreducible to its members' separate states while it obtains, and obtains because of what its members are.

This is a different position from the ones surveyed earlier and it is not the position this book will take. The difference is worth stating carefully, since it is fine and much depends on it. On Tomasello's account the capacity for the relation is prior and the relation follows. On the account developed here the relation is prior and what appears as a capacity is the relation's having stabilised. The two accounts will frequently describe the same episode in nearly the same words and will disagree about which term is doing the explaining.

Rogoff's participation model raises a different difficulty and it is a difficulty about description rather than about mechanism. Participation is a term for what a newcomer does in an activity that already exists. The activity has a form, the form is maintained by the community, and the newcomer's trajectory runs from the periphery toward the centre of something already constituted. What the model describes well is a child entering a practice. What it has less to say about is a practice altered by the entry, and the household case makes this pressing. A first child does not join a family in the sense in which an apprentice joins a workshop. The family that exists after the birth was not there before it, and the parents' own competence at being parents is generated in the same process by which the child is generated as a member.

Proposition 1.4. *An account grounding relational phenomena in a capacity for relation explains why a relation can occur and treats the relation's occurrence as the exercise of something prior. What it does not describe is a relation that generates the capacity by which it is subsequently explained.*

The verbs make the location visible in the usual way, though they are more mixed here than elsewhere. Alongside the child who *has* shared intentionality, *develops* the ability to read intentions, and *acquires* a capacity for cooperation, one finds states that are *shared*, attention that is *joint*, and goals that are *held together*. The second set has no bearer, and its presence in the vocabulary marks how far the tradition has moved. The first set is where the explanations are.

A final observation, since it will matter when the projection test is conducted in [**ch.?? ch:projection**]. Of the accounts in this survey, shared intentionality is the one whose empirical findings map most directly onto the propositions this book will defend. The disagreement is about what those findings show rather than about what they are. A reader persuaded by Tomasello's evidence and unpersuaded by this book's ontology will still find the two accounts describing the same infants doing the same things, and the choice between them will turn on which term is treated as basic.

1.6 The Endowed Mind

The accounts examined so far differ about what builds a mind and agree that something builds it. The tradition considered here disputes the agreement. Its proposal is that a substantial part of what a mind contains is present at the outset, that this part is structured rather than diffuse, and that development consists in a good deal less construction than the constructivist supposed.

The argument arrived first in linguistics. Chomsky (Chomsky, 1965, 1980) observed that a child acquires a grammar on the basis of what the child hears, that what the child hears is finite and contains errors, and that the grammar the child arrives at licenses judgements about sentences never encountered. The gap between the input and the attainment is the poverty of the stimulus, and the proposal that closed it was that the child brings constraints to the task, so that only a restricted class of grammars is entertained at all. Whatever is concluded about the specific form of the proposal, the argument identified a genuine difficulty for any account on which a mind is assembled from what reaches it.

The developmental version of the argument came later and rests on a different kind of evidence. Infants cannot be asked what they think, and the methods that made the field possible are indirect: an infant looks longer at an event that violates an expectation, and the differential looking is read as evidence that the expectation was there. On this basis Spelke and Kinzler (2007) and others have proposed a small number of systems present in the first months of life. One represents objects as cohesive bodies that persist through occlusion and move on continuous paths. Another represents agents as directed toward goals and as responding to the environment at a distance. A third represents approximate number, discriminating quantities by ratio. A fourth represents spatial layout in a way that supports reorientation. These are the core systems, and the claim about them is specific: they are early, they are domain-particular, they operate on a restricted range of inputs, and they persist into adulthood alongside whatever is later constructed.

Carey's development of the position (Carey, 2009) addresses what the constructivist account was for. If a mind begins with a small number of narrow systems, the question of how it arrives at concepts none of those systems contain becomes pressing. Her answer is that

conceptual change occurs, that it is discontinuous, and that a specifiable mechanism carries it out. A placeholder structure is acquired from the surrounding culture, most often through language, and is then filled in by a bootstrapping process in which the initially uninterpreted structure comes to be understood through modelling relations to what is already represented. The account of how a child comes to represent exact large numbers is the worked case and it is detailed.

Two features of this tradition should be recorded before the ontological question is put to it.

The first is that it has been unusually productive of findings that other accounts did not anticipate and cannot easily accommodate. That infants track object permanence far earlier than the classical account allowed is now well established, and the establishment came from these methods. Whatever the interpretation, the phenomena are there.

The second is that the tradition is internally contested in ways that matter. Whether the looking-time measures license the representational interpretation placed on them is disputed. Whether core knowledge is best described as knowledge or as a set of perceptual sensitivities is disputed. Whether the number system represents number or magnitude is disputed. The section that follows examines the tradition's ontological commitment rather than adjudicating these.

The commitment is the plainest in the survey. What develops is located in the child, and the location is now doubly secured: the property is the child's, and it is the child's before any relation has occurred. Where the constructivist made the child the builder and the sociocultural theorist made the community the source, the nativist makes the endowment prior to both. An infant in the first weeks, before any history of interaction, already represents.

The relation's office follows and it is the narrowest yet encountered. Experience triggers, selects among, or fills in what the endowment supplies. Chomsky's parameter-setting is the explicit version: the environment supplies a small number of decisions among options already enumerated. Carey's bootstrapping grants the environment more, since the placeholder structure comes from the culture and the child does not invent it. Even there, the culture supplies a symbol sequence and the child's own modelling operations do the interpretive work.

Proposition 1.5. *An account on which structure is endowed prior to interaction assigns the relation the office of selecting among options already present. The relation determines which of the available structures is realised and contributes nothing to what is available.*

There is a further consideration, and it concerns what this tradition would say about the propositions this book will defend. A nativist has a ready response to any claim that a capacity is generated relationally: the capacity was there, the relation revealed it, and an observer who sees generation is seeing the removal of an obstacle to expression. The response is always available and it cannot be refuted by an observation, since any developmental sequence is compatible with a sufficiently structured endowment expressing itself on a schedule.

This is worth noting because it is the mirror image of the difficulty identified in §1.25. There it was observed that the bearer commitment can redescribe any relational phenomenon and is therefore not refutable by counterexample. The nativist position has the same property, and so does this book's. Three accounts each capable of accommodating any observation are not distinguished by observation, and the question of what distinguishes them is taken up in

§1.26.4.

The verbs, finally. An infant *has* core knowledge, *represents* objects, *is endowed with* a system, *comes equipped*. The last two are the tradition's own and they say the whole of it: the child arrives at the world already carrying what will develop, and what happens afterward is the unpacking.

1.7 The Self-Organising System

The tradition considered here proposes that developmental change is the behaviour of a system with many interacting components, that stable forms arise from the interaction without being specified anywhere in advance, and that the vocabulary of nonlinear dynamics is the right vocabulary for describing what happens. It is the most recent of the accounts surveyed, and among them it stands closest to this book in method while diverging on a question that turns out to be decisive.

Thelen's work on infant stepping (Thelen and Fisher, 1982) is the case that established the position, and it is worth following because the argument runs through it rather than around it. Newborns produce alternating stepping movements when held upright. The movements disappear at around two months and return near the end of the first year. The received explanation was maturational: a reflex is present, cortical development inhibits it, later development releases a voluntary version. Thelen submerged the infants' legs in water and the stepping returned. The legs had gained fat faster than muscle, and the disappearance was a matter of mass relative to strength. Nothing had been inhibited and nothing was later released.

The general moral is larger than the case. A developmental change that appeared to require a controller, an inhibitor, and a schedule turned out to require none of them. What produced the observed pattern was the assembly of components at a moment, and the components included the infant's body, its immediate physical circumstances, and the task. Thelen and Smith (1994) generalised this into a position: behaviour is softly assembled from whatever is available, stable patterns are attractors in the space of possible assemblies, and development is change in the layout of that space.

Van Geert's contribution (van Geert, 1991) is formal and addresses growth. Developmental curves, he showed, can be generated by simple coupled equations in which growers compete for limited resources and support one another. The models produce features the data show and that linear accounts do not predict: sudden transitions, temporary regressions, variability that increases before a change rather than after it. Fischer's dynamic skill theory (Fischer, 1980) applies related reasoning to cognitive development and yields the proposition that a skill has no single level, only a range whose upper bound depends on the support present.

Three things this tradition established deserve recording before the divergence is stated.

The first is that variability carries information. The received practice treated fluctuation as measurement error to be averaged away. On the dynamic account fluctuation is a property of the system near a transition, and its increase is evidence that a reorganisation is approaching. This has been confirmed often enough to be relied upon.

The second is that stages are results rather than causes. If a stable pattern is an attractor, then observing a stage explains nothing, since the question is what makes that region of the space attracting. This is a real reversal of the explanatory direction and the tradition is entitled

to it.

The third is that the context of an assembly is a constituent of what is assembled. Thelen's water is not an influence on stepping; it is part of what the stepping consists of. The tradition is genuinely committed to this and has resisted the pressure to relocate the explanation inside the infant.

The divergence lies elsewhere, and stating it requires care, because on a quick reading this book and this tradition are saying the same thing.

Ask what the components of the system are. Across the literature the answer is consistent: the infant's neural state, its muscles and their mass, its posture, its arousal, the surface it stands on, the object within reach, the caregiver's hand. These are components of a system whose behaviour is emergent, and the emergence is real. Every component is a physical particular, and the caregiver appears in the list as a source of support, a supplier of a task constraint, or a physical circumstance.

What follows is that the system in question is a system of things standing in causal relations. The relations are dense, reciprocal, and non-decomposable, and this is exactly what distinguishes the account from a linear one. They remain relations between components that exist independently of them and that could in principle be listed before the relations are described. A system in this sense is an arrangement of parts.

This book's commitment is a different one and the difference is not a matter of degree. It holds that the terms of a relation are constituted in the relating, so that a list of components made prior to the relation would already have decided the question. Where the dynamic account says that a caregiver and an infant form a coupled system, this book says that what is coupled is not a caregiver and an infant, since neither is available as an independent term before the coupling.

The distinction is fine and its practical consequences are visible in what each account can describe. A dynamic account describes with precision how two components' interaction produces a pattern neither would produce alone. It has no vocabulary for a component that comes into existence through the interaction, because a component is what interacts. The parent who becomes a parent in the course of raising a child is, on the dynamic account, a component whose parameters changed.

Proposition 1.6. *An account treating development as the behaviour of a system of interacting components describes emergent pattern with precision and requires that the components be specifiable prior to the interaction from which the pattern emerges.*

Two further observations, both bearing on later parts of this book.

The dynamic tradition is where the formal apparatus of this field currently resides, and any formal proposal made in [**ch.?? ch:models**] will be measured against it. That measurement is appropriate. A proposal that reproduces what coupled growth equations already deliver, in a different notation, will have contributed a notation. The question those chapters must answer is what a relational formalism represents that a component formalism cannot, and the answer will have to be more specific than a preference about vocabulary.

The second observation concerns the verbs, which in this tradition are the most interesting in the survey. Alongside the child who *has* a skill level, one finds patterns that *emerge*, systems that *self-organise*, behaviour that is *softly assembled*, and states that *settle* into attractors. None of

the second group has a bearer, and the tradition has gone furthest of any surveyed here toward a vocabulary in which what develops is not held by anyone. What it has not done is remove the components from the description, and the components are where the bearers went.

1.8 The Ecological Surround

The accounts examined so far locate a child and then ask what acts upon it. The tradition considered here asks a prior question: what is the structure of the surrounding within which a child develops, and how far out does it extend before it stops mattering?

Bronfenbrenner's answer (Bronfenbrenner, 1979) was a set of nested systems. The microsystem contains the settings in which a child directly participates, the household, the classroom, the group of children on a particular street. The mesosystem is the relation between two such settings, and the proposal that this constitutes a distinct level was his first substantial contribution: what happens between a household and a school is not reducible to what happens in either. The exosystem contains settings in which a child does not participate and which nonetheless reach the child, a parent's workplace being the standing example. The macrosystem contains the arrangements of law, custom, and economy within which all of these sit. He added the chronosystem later to hold change over time.

Two features of the model deserve statement before the ontological question is put.

The first is that the mesosystem was a genuine discovery of a level. A child whose household and school describe the child in incompatible terms is in a situation that neither setting contains, and before Bronfenbrenner there was no vocabulary for it. Whatever is concluded below, this remains a contribution.

The second is that Bronfenbrenner revised the model substantially in his later work, and the revision is instructive. He came to hold that the early formulation had been read as a taxonomy of contexts and that the reading had cost the theory its explanatory content. The bioecological model that replaced it (Bronfenbrenner and Morris, 2006) made proximal processes central: the recurring, progressively more complex reciprocal interactions between a developing person and the persons, objects, and symbols in the immediate environment. These processes were declared the engines of development, with context, person, and time as the parameters conditioning their operation. He was explicit that a study which measured contexts and outcomes without observing proximal processes had not tested his theory.

The revision moves the tradition closer to this book and it is worth marking how far. Proximal processes are reciprocal by definition. They are described as occurring over extended periods and as requiring increasing complexity to remain developmentally effective. This is an account in which the interaction, rather than either party, is the unit of analysis.

What remains is the question the chapter has been putting.

A proximal process, in Bronfenbrenner's formulation, is the engine of development, and development is what happens to the developing person. The process is specified as an interaction between a person and an environment, and the person is one of the four parameters. Person characteristics, in the mature model, are of three kinds: dispositions that set processes in motion, resources of ability and experience, and demand characteristics that invite or discourage response from others. All three are properties of an individual, and the third is a property of an individual defined by its effect on others.

The environment, correspondingly, is a structure of settings within which the person is located. The nesting figure makes this vivid and the vividness is the difficulty: a set of concentric circles has a centre, and the centre is where the child is placed.

Proposition 1.7. *An account organised around a developing person situated in nested environments requires that the person and the environments be distinguishable in order to be nested. The developing person occupies the centre of the figure, and what surrounds is what acts upon what is surrounded.*

The cross-cultural tradition arrived at a related structure from a different direction and with more attention to the content of the surround. Whiting and Whiting (1975) established that variation in what children do all day is enormous, that it tracks the household's productive arrangements, and that a great deal of what developmental psychology had taken as sequence was a description of one arrangement. Super and Harkness (1986) proposed the developmental niche as an analytical unit, with three components: the physical and social settings a child occupies, the customary practices of care, and the psychology of the caretakers, which includes their beliefs about what children are and what they need. LeVine's work on parental goals (LeVine et al., 1994) argued that rearing practices are organised around a hierarchy of concerns beginning with survival and that the ordering is a response to conditions rather than a preference.

This tradition supplies something no other account in this survey does, and this book is directly indebted to it. The proposal that a caretaker's beliefs about what a child is form a component of the developmental environment, and that those beliefs vary systematically with material arrangements, is the empirical counterpart of the argument §1.1.2 conducted about the vocabulary of theories. What a household takes a child to be conditions what the household does, and what the household takes a child to be is not freely chosen.

[ch. ?? ch:variety] takes up this literature at length, since the comparative survey is its proper home. What matters here is narrower. The developmental niche is described as an environment surrounding a child, its three components are components of the surround, and the child is what the niche is a niche for. The tradition's radicalism concerns the content of the environment and the variability of what had been taken as universal, and it leaves the figure of a child within a surround intact.

The verbs are consistent across both branches. A child *is embedded in* a context, *is exposed to* a setting, *develops within* a niche, *is affected by* an exosystem. Every one is locative and every one places the child at the centre of what is described.

1.9 The Naturalised Bond

Attachment theory presents the chapter with its sharpest case, because the relation is not a peripheral consideration within it. The relation is its subject. Bowlby's proposition (Bowlby, 1969) was that an infant's tie to a caregiver is a primary system in its own right, organised around proximity and available protection, and that the distress of separation is the operation of that system rather than a symptom of some other need being obstructed. The proposition was directed against accounts on which the tie derived from feeding, and it displaced them. Whatever else the present chapter concludes, it should record that attachment theory estab-

lished the caregiving relation as an object of serious study and that the establishment has held.

The apparatus that made this possible was ethological. A behavioural system, in the sense Bowlby borrowed, is an organised set of responses with a set point, activated under specifiable conditions and terminated when the set point is reached. Proximity-seeking activates under threat, fatigue, or unfamiliarity, and terminates on achieved proximity. The system has a function in the evolutionary sense, which is protection, and the function accounts for why it should exist at all. The apparatus was rigorous, it generated predictions, and Ainsworth's procedure (Ainsworth et al., 1978) turned the predictions into an observational method that has been used for six decades across many populations.

Attend now to what the apparatus does with the relation.

A behavioural system is a property of an organism. It is located in the infant, it has a set point the infant carries, and it is activated by conditions the infant registers. The caregiver enters as the object toward which the system is directed and as the environmental variable determining whether the system's aim is achieved. Sensitive responsiveness is a property of the caregiver; the infant's system is a property of the infant; and the pairing of the two produces an outcome that is then classified. The relation is thoroughly present in the theory and thoroughly composed of two parties who arrive with their properties already constituted.

The classification is where the consequence becomes visible. A dyad assessed in the Strange Situation receives a category, and the category is understood to characterise the relationship rather than the infant alone. This is a real advance over an instrument that would return a trait score, and it is often cited as evidence that attachment theory measures relations. Consider what the category does. It assigns a type. A type persists, is expected to show stability across assessments, and is predictive precisely to the extent that it does persist. The instrument returns, for a relation, something with the logical form of a property: a value on a classification, borne by an entity, stable enough to be measured again.

This is what it is for a relation to be naturalised. The relation becomes a thing with characteristics. Once it has characteristics, the question of how it is generated becomes the question of what caused it to have the characteristics it has, and the causal story runs backward through caregiver sensitivity to the caregiver's own history, which is itself classified. The internal working model completes the arrangement by relocating the whole matter inside the infant, as a representation the infant carries forward and applies to later relationships. The relation, having been described as a system with an object, is then stored as a model in a head.

None of these moves is unmotivated. Each was required for the theory to make contact with evidence, and the evidence it made contact with is substantial. The observation to be recorded is narrower. An apparatus that classifies relations by type will find what persists in them, and what persists is precisely what a relation has in common with a property. Whatever in a relation is not of that kind falls outside the instrument's reach, and it falls outside not through neglect but by the construction of the instrument.

Proposition 1.8. *An instrument that assigns a persisting type to a relation returns, for that relation, something with the logical form of a property. What the instrument cannot register is any respect in which the relation is generative rather than characteristic.*

Two matters deserve separate notice, since both are places where attachment research has moved further than its founding apparatus.

The first is that security is a description of a functioning relation and carries no account of how such a relation produces anything new. A securely attached infant explores more readily, and exploration is treated as the behavioural correlate of a secure base. Exploration in this framework is what the infant does when the attachment system is quiescent. The framework has a term for the condition under which the infant is free to explore and no term for what the exploring generates in the relation itself. The parent is a base from which the child departs and to which the child returns. The base does not change through being departed from.

The second is the direction of the account. Attachment runs from caregiver sensitivity to infant security, and where the reverse direction is studied it is generally studied as a moderator, with infant temperament affecting how readily sensitivity produces security. What the framework does not contain is a term for the caregiver being generated by the caregiving. The parent whose own capacities are formed through raising a child is doing something the theory has room to acknowledge and no apparatus to describe. This will become one of the central matters of [**ch. ?? ch:absorption**].

The verbs, once more. An infant *has* an attachment style, *develops* a working model, *shows* secure behaviour, *is* securely attached. The last of these is the most revealing, because it predicates of the child a condition that the theory itself holds to be a property of a dyad. The vocabulary settles the location even where the theory resists it.

1.10 The Held Infant

The psychoanalytic tradition entered this territory before any of the others and has remained in it longest. Its evidence is of a kind the empirical accounts do not admit, drawn from the consulting room and from a method whose reliability has been contested since its founding. Its influence on how childhood is conceived, in and beyond the clinic, exceeds that of anything else surveyed here. And it contains, in Winnicott, a formulation closer to this book's position than any other in the chapter, which is the reason the section runs at length.

Freud's account (**Freud, 1923**) placed the family at the centre of what a person becomes. Development proceeds through a sequence in which drive attaches successively to different bodily zones and different objects, and the residues of that sequence organise adult life. The specific stage theory has not survived. What has survived is the structural proposal underneath it: that a person is formed in a small number of early relations, that the formation is largely inaccessible to the person, and that what was formed continues to operate. Every subsequent account in this section works within that proposal.

Klein (**Klein, 1975**) moved the emphasis from drive to object. An infant, on her account, is from the beginning in relation to objects, initially partial ones, and its inner life consists in what happens to those objects under the pressure of love and destructiveness. The paranoid-schizoid and depressive positions name two organisations of that inner world, the second achieved when the infant becomes able to recognise that what it loves and what it attacks are the same object. Whatever is thought of the specific developmental timetable, Klein established that a mind's contents are relational in form. What a person carries is not sensation and disposition but objects and relations to them.

Bion's contribution (**Bion, 1962**) addresses what the caregiver does with what the infant cannot manage. An infant experiences states it has no means of processing, and it projects

them; a caregiver receives them, is affected by them, holds them, and returns them in a form that can be borne. Containment is his term for this, and the account is of a capacity built in the infant out of an operation initially performed by another. The parallel to internalisation is close and the difference is that what is internalised here is a function rather than a content.

Lacan's rereading (Lacan, 2006) returns the tradition to the question of how a subject comes to be at all. The mirror stage describes an infant's recognition of its own image as an anticipation rather than a report: what is recognised is a coherence the infant does not yet possess, and the identification with it founds the ego on something the infant is not. Beyond this lies the symbolic order and the position Lacan calls the big Other, the locus from which a subject is addressed, recognised, and given a place. His claim is that a subject is constituted in submission to that order, that its desire is organised by what the Other is taken to want, and that no subject stands outside this arrangement. What matters here is the structure of the claim: the subject is an effect of a relation to something it does not author.

Winnicott is where the tradition approaches this book most closely, and his formulations require quoting exactly, since their force lies in their precision.

His central statement (Winnicott, 1965) is that there is no such thing as an infant, and the sentence continues: wherever one finds an infant one finds maternal care, and without maternal care there would be no infant. This is offered as an ontological remark rather than a claim about dependency. An infant is not a small person who happens to require assistance. The unit that exists is the nursing couple, and the infant as a separate being is a later achievement rather than a starting condition.

From this several of his other formulations follow. The holding environment is what the caregiver provides, and the provision is not an action performed on the infant but a condition within which the infant comes to be. The good-enough mother fails the infant progressively and in graduated amounts, and the failures are what permit the infant to develop its own capacities, so that the caregiving that succeeded perfectly would prevent what it aimed at. Transitional phenomena occupy a space that belongs neither to the infant nor to the world, and Winnicott insisted that the question of whether the object was found or created is one that must never be asked of a child, since the space depends on the question remaining unposed. The true self and the false self distinguish a spontaneity that arises from the infant's own gesture from a compliance organised around what the environment requires.

The proximity of this to what this book will develop is considerable and should be stated plainly. A reader who took Winnicott's (Winnicott, 1965, 1971) ontological remark seriously, worked out its consequences, and stated them in a general form would arrive somewhere near the position of [Chapter ?? ch:commitments].

What remains, then, is a question about what the tradition does with the insight, and it can be stated as three observations.

The first concerns the direction of the account. In Winnicott and in Bion alike, the caregiver's provision is what the infant develops out of, and the caregiver is described as the one who provides, holds, contains, survives, and fails in graduated amounts. What the caregiver becomes through the caregiving is not part of the account. The mother's primary maternal preoccupation is described as a state she enters in order to be able to provide, which is a state of the caregiver in the service of the infant's development rather than a development of her own.

The second concerns where the achievement is finally located. The infant's development, on these accounts, moves toward a capacity it comes to hold. Bion's containment produces an apparatus for thinking that becomes the infant's own. Winnicott's holding produces a self capable of being alone in the presence of another. The relation is where the capacity comes from and the capacity ends up in a person. The vocabulary is developmental in the ordinary sense: what begins between finishes within.

The third concerns evidence and is a different kind of point. The tradition's claims about infancy are largely reconstructions from adult clinical material, and the reconstruction is inferential in a way that permits the inference to be shaped by the theory guiding it. This has been the standing objection since Freud and it has not been answered. The observation is recorded here because the tradition's proximity to this book's position could otherwise be mistaken for support, and it is not support. Winnicott's formulation is available to be built upon; the evidence for it is of a kind that settles nothing.

Proposition 1.9. *The psychoanalytic tradition supplies the closest available statement of a relational constitution of the subject and treats what is so constituted as arriving, in the end, within the person constituted. What is described as beginning between two parties is described as finishing in one of them.*

A final note on Bowlby, since his break from this tradition was examined in §1.9 without being placed. Bowlby was trained within psychoanalysis and left it over evidence. He held that claims about infancy should be answerable to observation of infants, and the ethological apparatus was what allowed him to construct such claims. The gain was a research programme that has produced six decades of findings. The cost was the vocabulary. Holding, containment, the transitional space, and the true self have no counterpart in attachment theory, and the concepts that replaced them are those that survived operationalisation. Both the gain and the cost should be held in view, since the book will draw on both traditions and for different purposes.

The verbs, finally, and they are the most divided in the chapter. The infant *introjects*, *internalises*, *develops* a capacity, *achieves* the depressive position. Alongside these stand formulations with no bearer at all: there is no such thing as an infant, the transitional object is neither found nor created, the subject is an effect of the signifier. The tradition contains both vocabularies and has never resolved which is doing the work.

1.11 The Response Surface

The behaviourist account differs from the others in this chapter by holding its premise openly. Where Piaget's constructing subject and Bowlby's behavioural system are assumptions the theories operate with, the behaviourist commitment was announced as a methodological principle and defended in print. Explanation should proceed by relations between observable conditions and observable behaviour, and terms referring to inner states should earn their place or be dispensed with. Whatever is thought of the position, it was arrived at deliberately, and this section is correspondingly brief. A premise that has been stated requires less excavation than one held in the verbs.

The account of development that follows is straightforward. A child's behaviour is shaped

by its consequences. Responses followed by reinforcement become more probable, responses followed by no consequence or by aversive consequence become less so, and the accumulated history of such contingencies constitutes what a child has become. Language is acquired this way, as is social behaviour, and what appears from outside as the emergence of a capacity is the sedimented result of a schedule.

The apparatus was successful in a manner worth acknowledging plainly, since it is now conventional to treat behaviourism as a superseded episode. It is not superseded in practice. Contingency management remains among the most reliably effective interventions available for a range of childhood difficulties, and applied behaviour analysis continues to produce outcomes that competing approaches do not match. A theory whose techniques work is a theory that has identified something real, whatever is said about its interpretation of what it identified.

What it identified is worth naming precisely, because the naming locates the premise. Behaviour is sensitive to consequence. This is true, it is demonstrable, and no account of development can afford to deny it. The premise enters with the further claim that this sensitivity is the whole of the matter, so that a child is exhaustively describable as a surface on which contingencies operate.

A surface has no interior and requires none. It has a history, which is the record of what has been impressed upon it, and it has a current disposition, which is the summed effect of that history. The parent, in this account, is an arranger of contingencies. The relation between them is a schedule.

Two features of this arrangement bear on the book's concerns.

The first is that the account is entirely one-directional and makes no attempt to be otherwise. Contingencies are arranged by one party and undergone by the other. That the child also arranges contingencies for the parent is true, is occasionally noted, and has no structural place in the theory, since a theory of shaping requires a shaper. The reciprocal case is describable only as two shaping operations running simultaneously in opposite directions, which is not the same as a relation and does not become one by being doubled.

The second is that the account contains no term whose loss would constitute degradation. A schedule can be effective or ineffective, well designed or badly designed, and these are assessments of its efficiency in producing specified behaviour. A relation on this account cannot deteriorate, because there is nothing in it besides the contingencies, and a change in contingencies is a change of schedule rather than a loss. The vocabulary that this book will require in [ch. ?? ch:two-levels], in which a household loses a distinction it once could make, has no counterpart here. What would be lost, on the behaviourist account, is a discriminative stimulus, and discriminative stimuli are established and extinguished as a matter of course.

Proposition 1.10. *An account in which a child is a surface on which contingencies operate has resources to describe the efficiency of an arrangement and no resources to describe its degradation, since degradation requires that something have been present which is now absent, and the account admits nothing that could be absent besides a contingency.*

The verbs in this literature are the most consistent in the chapter and the most revealing for being so. A child *emits* responses, *is reinforced*, *acquires* a repertoire, *extinguishes* a behaviour. The child is grammatically an object throughout, and this is a fair report of the theory's com-

mitment. The behaviourist would not regard the observation as a criticism. Nor is it offered as one. It records that the location question has been answered here with a completeness the other accounts do not attempt: nothing is located in the child except a history of what was done to the child.

1.12 The Modelled Act

Bandura's work (Bandura, 1977, 1986) began as an extension of the behaviourist programme and ended somewhere the programme could not have reached. The extension is worth following, since it is the clearest case in this survey of an account moving under the pressure of its own findings.

The initial observation was that children acquire behaviour they have never performed and for which they have therefore never been reinforced. A child who watches an adult treat a doll in a particular manner will treat it that way afterward, without instruction and without consequence having been arranged. This is not explicable within an account on which the shaping of emitted responses is the whole of learning, and Bandura's conclusion was that observation is itself a mode of acquisition.

The apparatus he built around this is more elaborate than it is usually given credit for. Observational learning was analysed into attention, retention, reproduction, and motivation, each a separable process with its own conditions. Vicarious reinforcement was proposed as a mechanism: the consequences of another's action are informative about the consequences of one's own. Reciprocal determinism, his term for the relation among person, behaviour, and environment, held that each of the three influences the others, and this was directed against unidirectional formulations in both the behaviourist and the trait traditions.

The later work moved to self-efficacy (Bandura, 1997), which is a person's judgement of what they can accomplish, and to the proposition that such judgements govern what a person attempts, how long they persist, and how they interpret failure. This became one of the most heavily investigated constructs in psychology and remains so.

Three of these deserve to be marked as gains for any account of rearing.

Observation without arranged consequence is a real mode of transmission and it is the mode by which most of what passes between a parent and a child passes. Nothing in a household is arranged as a contingency, and a great deal is watched.

Reciprocal determinism was an early and explicit rejection of one-way causation. Bandura insisted that a person's behaviour alters the environment that subsequently acts on the person, and he insisted on it before this was common.

Vicarious reinforcement locates a source of learning outside the learner's own history, which the operant account could not do.

Ask now where the theory places what is acquired.

An observer acquires a representation of the modelled act, retains it, and reproduces it under conditions of adequate motivation. The representation is the observer's. Self-efficacy is a belief held by a person about that person's own capacities, and the entire research literature on it measures it as an individual difference. Reciprocal determinism specifies three influencing terms, of which two are properties of a person and the third is the surroundings.

This is behaviourism's bearer commitment with an interior added. Where the operant ac-

count admitted nothing in the child besides a history of consequences, Bandura admitted representations, expectations, and self-judgements. Each is located in the same place the response repertoire had been.

Proposition 1.11. *An account in which acquisition proceeds by observation locates in the observer a representation of what was observed. The reciprocity such an account admits is reciprocity of influence between a person and an environment, which leaves both terms in place.*

The verbs, briefly. A child *acquires* a behaviour by observation, *retains* a representation, *holds* a sense of efficacy, *models* another's act. The last is transitive and its object is a person, which is as close as this vocabulary comes to naming a relation.

1.13 The Transactional Pair

The account examined here is the closest in mainstream developmental psychology to the proposition this book will defend, and it should be handled with corresponding care.

Sameroff's transactional model (Sameroff and Chandler, 1975; Sameroff, 2009) began from a finding that the literature of the period could not accommodate. Perinatal complications predict later developmental difficulty weakly and inconsistently, and the strength of the prediction varies with the family the child is born into. Neither a constitutional account nor an environmental account explains this pattern, since each predicts a stable effect of its own variable.

The proposal was that outcomes are produced by continuous mutual influence over time. An infant who is difficult to soothe alters what a caregiver does; the altered caregiving alters the infant; the altered infant alters the caregiving again. What is observed at any later moment is the accumulated product of this exchange and is not attributable to either party's initial state. Sameroff stated the consequence directly: neither the child nor the environment at time one predicts the outcome, because both have been transformed by their interaction in the interval.

Several things follow that distinguish this from everything examined earlier.

Bidirectionality is constitutive rather than added. The model does not say that children influence parents in addition to parents influencing children. It says that the developmental outcome is a property of the exchange, and that a measurement of either party in isolation is a measurement of something the exchange has already altered.

The account has a term for what this book calls direction. Bell's earlier argument (Bell, 1968) on the direction of effects (Bell, 1968), which Sameroff's model absorbed, established that a correlation between parental behaviour and child behaviour is uninformative about which produced which, and that the developmental literature had been reading such correlations in one direction by assumption.

The account also predicts that interventions on either party alone will produce smaller effects than expected, which is a testable claim that has been repeatedly borne out.

Related work extends the structure. Tronick's still-face procedure (Tronick et al., 1978) demonstrated that an infant of a few months responds to the cessation of a caregiver's responsiveness with a rapid and organised change of state, and his mutual regulation model treats the ordinary condition as one of continuous repair of small mismatches. Trevarthen's primary intersubjectivity (Trevarthen, 1979) proposed that infants engage in the coordination of affect

and timing with a partner from the first months, and that this coordination is not the exercise of a solitary capacity on a social object.

The proximity to this book's position is real. The remaining distance can be stated in one observation.

The transactional model is a model of two parties in continuous mutual influence, and the two parties are its primitives. Sameroff's formal statements are written as a chain of states, in which the child's state at each time and the environment's state at each time each depend on both states at the previous time. Something must occupy those positions at time one for the chain to be defined. The model abolishes the priority of either party's contribution and retains the parties.

What this book proposes is a step past that. It holds that what stands at each end of the exchange is itself produced in the exchange, so that a state of the child at time one is already a relational fact rather than an initial condition. The transactional model can describe a child transformed by an exchange and requires a child to enter it. The difference is not visible in most of the phenomena either account describes, and it becomes visible at the beginning, where the transactional model must posit initial states that the account developed here declines to posit.

Proposition 1.12. *A model of continuous mutual influence between two parties requires initial states for both parties in order to be specified. The mutuality it describes is complete and it begins with terms it did not generate.*

Two further remarks, both bearing on how this book uses the tradition.

The first is that the transactional literature supplies the strongest existing empirical warrant for the propositions of [ch. ?? ch:absorption], which concerns the reversal of direction within a relation. Where this book claims that a household in which the direction of contribution reverses differs structurally from one in which it does not, the transactional literature has established that such reversals occur, can be measured, and predict outcomes. The claim in [ch. ?? ch:models] that directional reversal is an observable rests on that literature having shown it observable.

The second is that Tronick's still-face procedure is the closest thing developmental psychology possesses to an experimental study of what [ch. ?? ch:silence] examines under a different description. The procedure withdraws a caregiver's responsiveness for a short interval and records what an infant does. That this produces a rapid and specific disorganisation in a healthy infant of a few months is among the most robust findings in the field, and its relation to the argument of that chapter is taken up there.

The verbs in this tradition are unlike those elsewhere in the survey and the difference is instructive. A dyad *co-regulates*, a pair *repairs* a mismatch, states *are coordinated*, effects *are bidirectional*. Several have no single bearer. What retains the bearer is the formal apparatus rather than the prose, and this is the reverse of the situation found in §1.7, where the prose spoke of emergence and the components did the work.

1.14 The Neural Account

Developmental neuroscience occupies a position in this survey unlike the others. It is not a theory of development in the sense the preceding sections have used. It is a body of findings

about the physical substrate, produced by methods that have improved rapidly, and it is compatible in principle with several of the accounts already examined. A nativist and a dynamic systems theorist can both point to neural evidence, and both do.

This section therefore does something narrower than the preceding ones. The substance of what neuroscience has established about the developing brain, and the methods by which it establishes it, are the subject of [ch. ?? ch:neural-part], which treats each function in turn and examines the instruments at length. What is at issue here is a single question, and it is the question this chapter has been putting to every account: what does a neural measure locate?

The answer is unusually clear, which is why the section is worth having.

A measurement of cortical thickness locates a quantity in a region of tissue. A measurement of white matter integrity locates a property in a tract. A measurement of activation locates a signal in a volume. A measurement of connectivity locates a statistical relation between two volumes. In every case the thing measured is a property of matter belonging to one organism, and the organism is bounded by its skin.

This is the bearer commitment in its most literal available form. Where the constructivist located schemes in a child by a theoretical decision that could in principle be revised, the neural account locates its properties in a child because the tissue is in the child. There is no interpretive step to contest. A brain is where it is.

Two consequences follow, and they pull in opposite directions.

The first is that a neural finding cannot by itself settle a question posed at the relational level. Consider a finding that children raised under conditions of severe deprivation show reduced volume in some structure. The finding is real and its practical importance is considerable. What it establishes is that a relational circumstance leaves a physical trace, which nobody doubted. What it does not establish is what the relational circumstance consisted of, since the measure was taken in one organism and the circumstance obtained between several. A trace is evidence that something happened and is not a description of what happened.

The second consequence cuts the other way and this book is bound by it. If a relational claim is not confirmed by a neural correlate, then a relational claim cannot be supported by one either. A finding that parent-child interaction of a certain kind is accompanied by some pattern of neural activity in the child adds no weight to a proposition about what the interaction generates. The temptation to cite such findings is considerable, since they carry an authority that philosophical argument does not, and the citation would be illegitimate. [ch. ?? ch:neural-part] states this restriction at its opening and observes it throughout.

Proposition 1.13. *A neural measure locates a property in tissue belonging to a single organism. It therefore registers the trace of a relational circumstance and does not describe the circumstance, and this holds symmetrically for accounts that would be confirmed by such traces and accounts that would be embarrassed by them.*

A third matter deserves separate statement because it is frequently confused with the first two. Nothing above is an argument against reduction, and this book takes no position on whether mental phenomena are ultimately physical. The claim is about what a measurement locates rather than about what exists. Two organisms in a relation are, on any materialist account, two physical systems in causal interaction, and there is no further substance required. What follows from this is that the relation is physically realised, which is not the same as saying

that it is measurable in either organism taken alone. A property realised in an arrangement of two systems is not thereby a property of either.

There is one development within the neural literature that bears directly on this and it should be flagged here even though its treatment belongs later. Over the past two decades methods have appeared that record from two brains simultaneously during interaction, and the measures they yield concern the relation between the two recordings rather than the state of either. This is neuroscience approaching, with its own instruments, the question this chapter has been pursuing. Whether such a measure registers a relation or registers two organisms whose separate states happen to covary is a question the field has not settled and this book does not settle. It is examined in [[ch. ?? ch:two-brain](#)].

The verbs, briefly, since they are the plainest in the chapter and need no analysis. A brain *develops*, a region *matures*, a network *becomes* more efficient, a child's cortex *shows* a trajectory. The location is in the noun rather than in the verb, and no one has ever supposed otherwise.

1.15 The Reproduced Position

The tradition examined here asks a question none of the preceding accounts ask. Where they ask how a child develops, it asks why children of some households arrive at positions resembling their parents' with a regularity that no account of individual development predicts. Its answer is that rearing and schooling are among the mechanisms by which a structure of positions reproduces itself, and that this occurs without anyone intending it and largely without anyone perceiving it.

The question is a real one and the regularity is not in dispute. Across societies with markedly different institutions, the correlation between a household's position and its children's eventual position is substantial and has proved resistant to interventions designed to reduce it. Any account of childhood that cannot address this is incomplete, and most of the accounts surveyed above do not attempt it.

Bourdieu's apparatus ([Bourdieu and Passeron, 1977](#); [Bourdieu, 1990](#)) is the most developed. Cultural capital names the competences, dispositions, and familiarities that a household transmits and that institutions reward: a manner of speaking, a relation to written language, an ease in the presence of officials, a knowledge of what is done. These are acquired at home, are unevenly distributed, and are treated by schools as evidence of ability. Habitus names the durable dispositions laid down by early conditions, generating practices that reproduce those conditions without calculation and without rules. The school's role is decisive and is misdescribed by its own account of itself: it selects on cultural capital while presenting itself as selecting on merit, and the misdescription is what makes the selection legitimate.

Bernstein's contribution ([Bernstein, 1971](#)) concerns language and is more specific. He distinguished codes of speech differing in their dependence on shared context, and observed that schools operate in one of them. A child whose household speech assumes shared context arrives at an institution conducting itself in a register that assumes none, and the resulting difficulty is read as limited capacity. The proposal is not about vocabulary or correctness. It concerns the relation between a form of speech and the social arrangements that make it functional.

[Bowles and Gintis \(1976\)](#) proposed a correspondence between the social relations of school-

ing and those of work: the timekeeping, the subordination to external evaluation, the fragmentation of tasks, the deferral of gratification. What schooling transmits, on this account, is a disposition suited to a place in production, and it transmits this more reliably than it transmits any curriculum.

Althusser's formulation (Althusser, 1971) is the most abstract and the most consequential for what follows. Ideology, on his account, does not operate through beliefs a person holds. It operates by constituting individuals as subjects of a certain kind, through the everyday operations of institutions that address them. Interpellation is his term for the address, and the point of the term is that the one addressed is produced in the addressing. A subject called upon by an institution comes to be the subject that institution calls for.

Willis (Willis, 1977) supplied the corrective that keeps the tradition honest. His study of working-class boys found that they were not passively receiving a disposition. They actively rejected the school's account of the world, and the rejection was intelligent, penetrating the school's promises accurately. The rejection nonetheless delivered them into the positions the school would have assigned. Resistance conducted with clear sight produced the reproductive outcome, and this is a finding the reproduction theorists had not predicted.

Social reproduction feminism made visible what the male-authored versions had assumed: that the labour of producing the next generation is labour, that it is performed disproportionately by women, that it is unwaged, and that its availability is presupposed by every institution examined above. This changes what the object of study is. Rearing is work, its conditions are material, and the household is a site of production.

The tradition is thus the only one in this survey that treats rearing as located in material arrangements rather than in a dyad. This book's own commitment, stated in the preface, is closer to that than to anything else surveyed. The remainder of this section concerns where the two nonetheless diverge, and the divergence is more difficult to locate than in any previous case.

Begin with what the tradition explains. It explains the transmission of position. Its explanandum is a distribution: why the children of some households arrive where they do at a rate exceeding chance. Its mechanisms are accordingly mechanisms of transmission, and a mechanism of transmission requires something transmitted, a source, and a destination. Cultural capital is held by a household, acquired by a child, and converted at an institution. Habitus is laid down by conditions and carried forward. A code is spoken at home and encountered at school.

The destination in every case is the child, and what arrives there is a property the child thereafter has. This is the observation the section is for. The reproduction traditions relocate the cause of what a child comes to be, moving it from the child's constitution or the parent's technique to a structure neither party controls. They leave the child in place as the bearer of what results. A child possessing little cultural capital is described in exactly the grammatical form as a child possessing little inhibitory control, and the difference between the accounts is where the possession came from.

Proposition 1.14. *An account explaining the transmission of position relocates the cause of a child's trajectory outside both the child and the household and leaves the child as the bearer of what is transmitted. Relocating a cause is not the same as changing what is taken to bear the effect.*

Two further observations follow from this and both bear on later parts of the book.

The first concerns what a transmission model of this kind cannot describe. If what passes between generations is capital, disposition, or code, then it is a substance with a location at each moment, and the relation is the channel. This is structurally the difficulty identified in Vygotsky at §1.4, arriving now at a different scale. What a household transmits, on the account this book will develop in [ch. ?? ch:transmission], is neither a possession nor a disposition but a grammar: the terms in which a situation can be described, the distinctions available for making sense of a child, the moves a family can recognise as moves. A grammar has no location in the way capital does. It is not held by the parents and conveyed to the child, since the parents are also inside it, and this is why it changes without anyone deciding to change it.

The second concerns Althusser and is a genuine debt rather than a divergence. His proposition that a subject is produced in being addressed is close to what this book means, and closer than anything in Bourdieu. What separates them is that interpellation, in his account, runs from an apparatus to an individual and admits no reverse direction: the state addresses, the subject is constituted, and nothing in the apparatus is constituted by the address. The chapters on the household will require a term for the address that constitutes the one who issues it, and Althusser does not supply one.

The verbs, finally. A child *possesses* cultural capital, *acquires* a habitus, *internalises* a code, *is interpellated*. The last is passive and the tradition means it to be, which is its distinctive contribution. The others locate exactly as the developmental literature locates, and the tradition's radicalism about causes has left its grammar of possession untouched.

1.16 The Marxist Traditions

The account examined in §1.15 belongs to a tradition that has developed, since its classical statements, into a number of lines that disagree with one another substantially. They differ on whether the decisive matters are economic or cultural, on the standing of the state, on reform and rupture, on technology, on ecology, and on what a political practice should now consist of. Treating them as one doctrine would misdescribe the tradition and would also lose what is useful in it, since the lines that bear on rearing are not the same as those that bear on other subjects.

Each subsection below takes one line, states what it contributes to the questions of this book, and passes over the remainder of what it has said. The restriction follows from the taxonomy of §1.2.1: a great deal of this tradition addresses matters other than children, households, and schooling, and that material has no place in a chapter about developmental premises.

1.16.1 The Western Marxist Line

Gramsci, Lukács, Marcuse, and Bloch moved the analysis toward culture, ideology, and subjectivity, on the ground that a settlement is maintained less by force than by the general acceptance of an account of the world.

Gramsci's hegemony (Gramsci, 1971) is the operative concept and the institutions that circulate the account include the school. His position on schooling is not the one usually attributed to writers of his politics: he argued for a demanding common curriculum on the

ground that the children of subordinate groups require disciplined command of the dominant culture in order to contest it, and he was sharply critical of pedagogies that offered them something easier. Whatever is concluded about the argument, it is a serious position on early education and it is rarely represented accurately.

Lukács (1971) supplied reification, which names the process by which a relation between people comes to present itself as a property of a thing. The proximity to this chapter's finding should be marked plainly. What §1.25 identifies across the developmental literature is a relational fact appearing in the logical form of a property, and reification is the name an earlier tradition gave to that operation. This book's argument about the bearer commitment can be read as a claim that the developmental literature has reified the relations it studies, and a reader who finds that formulation useful is welcome to it, with one qualification: reification in Lukács is a consequence of a specific commodity form, and the argument here does not depend on that derivation.

Marcuse and Bloch contribute less directly. Marcuse's account of one-dimensional thought (Marcuse, 1964), in which alternatives cease to be thinkable rather than being defeated, is structurally the degradation of [ch. ?? ch:two-levels] at the scale of a society. Bloch's concern with the not-yet (Bloch, 1986), with what a situation contains as possibility rather than as fact, is the closest thing in the tradition to a vocabulary for generation, and §1.16.9 returns to it.

1.16.2 The Frankfurt School

Critical theory combined this material with psychology and sociology and produced several things this book uses.

Adorno's work on the authoritarian personality (Adorno et al., 1950) attempted to connect household relations to political character. The instrument has not survived scrutiny and the attempt is the point: a research programme asking how a family's manner of conducting itself contributes to what its children become politically is asking this book's question in a form the developmental literature does not.

Horkheimer and Adorno (2002) on instrumental reason describes the reduction of questions about ends to questions about efficient means. [ch. ?? ch:indices] examines a household form of that reduction, in which the question of what an evening with a child is for becomes the question of what it produces.

Habermas (Habermas, 1984, 1987) supplies two things. The distinction between communicative and strategic action separates an exchange conducted toward understanding from one conducted toward an outcome, and a household in which every exchange with a child has become the second kind is describable in his terms. The colonisation of the lifeworld by system imperatives is the general form of what Part V examines locally. His own account of how validity claims are redeemed in discourse also bears on [ch. ?? ch:questioning], since a question that cannot be answered against the questioner is not a question in his sense either.

1.16.3 The Analytical Line

Cohen (1978), Roemer (1982), and Elster (1985) applied formal treatment to claims the tradition had argued in other ways, using game theory, mathematical modelling, and causal anal-

ysis.

Its bearing here is methodological rather than substantive, and it is a bearing this book cannot avoid. [[ch. ?? ch:models](#)] proposes to submit claims about relational structure to formal treatment, and the analytical line is the nearest precedent for performing that operation on a tradition of this kind. Its difficulties are correspondingly instructive. What survived formalisation was not always what the tradition had taken to be central, several concepts turned out to be doing less work than their prominence suggested, and the exercise produced a body of results whose relation to the original tradition remains disputed. A programme that formalises a set of claims should expect to discover that some of them were doing less than they appeared to.

1.16.4 The Autonomist Line

Tronti (2019) and Hardt and Negri (2000) inverted the direction of explanation, treating the initiatives of workers as prior and the arrangements of capital as responses to them.

Two of its concepts bear directly on rearing. Immaterial and affective labour names work whose product is a relation, a state of feeling, or an attentive presence, and whose performance resists measurement by time. Rearing is affective labour by this description, it does not stop at the end of a working day, and the difficulty of measuring it is not a defect in the measuring. The commons names a form of holding that is neither private property nor state property, in which a resource is used and maintained without being owned. A household's shared understandings are held in this manner, and [[ch. ?? ch:shared-third](#)] draws on the concept.

The inversion of explanatory direction is itself worth noting. A tradition that had explained workers by reference to capital's requirements found that it could explain more by reversing the order. §1.13 recorded a structurally similar reversal within developmental psychology, where the direction of effects between parent and child had been assumed rather than established.

1.16.5 The Ecological Line

Foster (2000) and O'Connor (1998) developed the analysis of metabolic rift, the disruption of the exchanges between a society and the natural conditions on which it depends.

The bearing on childhood is direct and is likely to grow. Children now being reared will live through a climate trajectory their households did not choose and cannot alter, and this is a condition of rearing in the material sense this book's preface commits it to taking seriously. The developmental literature has barely addressed what it is to be reared under such a condition, and the framework of [[ch. ?? ch:blindness](#)] suggests why: the variable in question moves on a timescale that makes it invisible within any single childhood, which is the structural blindness that chapter describes.

1.16.6 The Feminist Line

This line has been treated in its social-reproduction form in §1.15, and two further contributions belong here.

Federici's historical argument (Federici, 2004) is that the separation of reproductive from productive labour was accomplished rather than given, through a specific and violent history, and that the household's present form is the residue of that accomplishment. This matters for the neutrality commitment of this book: an arrangement that appears natural is frequently the settled outcome of a contest whose losing side has been forgotten.

Fraser's crisis-of-care thesis (Fraser, 2022) holds that accumulation depends on care work while eroding the conditions under which care work can be performed. Applied to the present, it is a hypothesis about why rearing has intensified across a number of societies simultaneously, and it is better formed than most of the alternatives in circulation, which appeal to fashion, to anxiety, or to a collective error of judgement. [ch. ?? ch:variety] examines it against the comparative evidence.

1.16.7 The Postcolonial Line

Fanon (1967) and Amin (1976) address formation under colonial and post-colonial conditions, and Fanon's contribution is a developmental claim of a kind no other tradition in this survey makes.

The claim is that a person formed under a relation of subordination internalises a description of himself supplied by the party that subordinates him, that the description operates beneath what the person believes about himself, and that it is not corrected by information to the contrary. [ch. ?? ch:symbol-governs] examines the household form of exactly this structure, in which a judgement about a child governs the conditions under which evidence about the judgement is produced. That the same structure appears at the scale of a colonial relation and at the scale of a kitchen table is a point [ch. ?? ch:projection] takes up.

Amin's world-systems argument bears on the comparative chapters. If regions occupy positions in a single system rather than developing independently, then rearing arrangements in different places are not independent samples, and a comparison that treats them as such has misdescribed its own data. [ch. ?? ch:comparison] examines this as one of the difficulties facing any comparative instrument.

1.16.8 The Recent Directions

Work of the present century extends in several directions at once and the following bear on this book.

Digital capitalism addresses platform economies (Zuboff, 2019; Srnicek, 2017), algorithmic governance, and the extraction of value from recorded behaviour. Applied to childhood its object is a subject whose activity is recorded before that subject can consent, whose attention is a commodity in a market, and whose educational provision may pass into the hands of a party with a commercial interest in the record. Data labour treats ordinary activity as unwaged production and asks what is owed for it.

Work on the commons addresses knowledge, open-source practice, and forms of governance in which a resource is held and maintained without being owned. Platform cooperativism, participatory budgeting, and community education are practical experiments in the same direction, and [ch. ?? ch:household-governance] draws on the governance literature they have produced.

Several researchers have begun combining this material with complex-systems theory, network science, and institutional and evolutionary economics, addressing self-organisation, non-linear change, and the emergence of cooperative arrangements. This is the point at which the tradition comes nearest the formal apparatus of [[ch. ?? ch:models](#)], and the convergence is worth marking: a tradition that began by analysing the reproduction of structures has arrived, by its own route, at the study of how structures come into being.

1.16.9 The Generative Limit of Reproduction

The lines above differ in what they emphasise and share a structure at the point this chapter examines. The observation made in [§1.15](#) holds across all of them and can now be stated in a stronger form.

Reproduction is the tradition's organising concept, and a theory of reproduction is a theory of how an existing arrangement persists. Its mechanisms are accordingly mechanisms of persistence: capital converted at an institution, a code encountered and acquired, a subject interpellated into a position that awaited him, care work restoring labour power for another day. Each explains why the arrangement at the end resembles the arrangement at the beginning.

What such an account cannot describe is a household that produces something the surrounding structure did not supply.

The gap is worth stating concretely. A family may arrive at a way of valuing that its position does not underwrite and that its members did not encounter elsewhere. A household may develop a manner of settling disagreement for which the surrounding society has no name. Parents and children may jointly construct an understanding of some part of the world that neither brought to the exchange and that is not a diluted version of anything available outside it. These occur, they are not rare, and the reproduction traditions treat them as noise, as incomplete transmission, or as the resistance Willis described, which delivers the reproductive outcome anyway.

Proposition 1.15. *An account whose organising concept is reproduction explains the persistence of an arrangement and has no term for the generation of an arrangement that did not previously exist. Within such an account a household is a site at which a structure is transmitted and cannot be a site at which one is produced.*

This book proposes that a family is both. The proposal is not that reproduction theory is mistaken about what it describes, since the correlations it identifies are real and the mechanisms it proposes are largely correct. The proposal is that reproduction is one of two things a household does, that the other has not been given an account, and that supplying one is possible with the resources developed here.

The extension can be stated in a sentence. A household transmits a grammar, in the sense [[ch. ?? ch:transmission](#)] makes precise, and a household may also generate one. What is transmitted is the terms in which a situation can be described and the moves that can be recognised as moves; what may be generated is a term, a distinction, or a move that was not previously available anywhere. The conditions under which the second occurs are the subject of that chapter, and they are the conditions this book identifies throughout as the conditions of generation.

Three consequences deserve statement.

The first is that this locates the disagreement precisely, and it is not a disagreement about politics. A theory of reproduction and a theory of generation answer different questions, and the tradition has answered one of them. Its radicalism about causes, noted in §1.15, is unaccompanied by any account of how a cause could come to be other than it was.

The second is that Bloch is the exception within the tradition and deserves the credit. His concern with the not-yet, with what a situation holds as possibility rather than as fact, is an attempt at the vocabulary this section finds missing. What he did not supply is a mechanism, and the difference between a possibility that is latent and one that is generated is exactly what a mechanism would settle.

The third is that this is where the strongest connection to educational philosophy lies. Freire's proposal that a child is a co-namer of the world rather than a container for knowledge about it is the same claim arriving from another direction: what happens between a teacher and a student is the production of a name that neither held, and a pedagogy conducted as deposit forecloses it. §1.19 noted that Freire located the resulting consciousness in the student. The present point is that what he described as occurring between them is generation, and that a tradition organised around reproduction has nowhere to put it.

1.17 The Measured Style

Of all the literatures surveyed in this chapter, the one examined here is the only one whose primary object is what a rearing adult does. By the taxonomy of §1.2.1 it is therefore the closest to this book's own subject, and it is the account a reader of a book on childrearing is most likely to arrive already holding.

Baumrind's programme (Baumrind, 1967, 1971) began with observation. She watched children in nursery settings, identified groups differing in self-reliance, self-control, and approach to novelty, and then observed their households. The classification that emerged was organised on two dimensions that later work made explicit: the degree to which a household makes demands of a child, and the degree to which it responds to the child. The four combinations yield the familiar types. Authoritative households are demanding and responsive. Authoritarian households are demanding and unresponsive. Permissive households are responsive and undemanding. The fourth cell, added by Maccoby and Martin (1983), is neglectful.

The finding attached to this classification is that children of authoritative households do better on a wide range of measured outcomes, and the finding has replicated for half a century.

Three things about the programme deserve statement, and the second and third are more important than the first.

The classification is bidimensional rather than a single scale of strictness. This was Baumrind's own emphasis and it is regularly lost in transmission. Authoritative and authoritarian households are alike in what they demand and differ in whether the demands are explained, negotiable, and accompanied by response to what the child brings. The dimension that separates them is not severity.

The programme took the household's own conduct as the object of measurement rather than inferring it from outcomes. This was methodologically unusual at the time and remains uncommon.

And the finding has been tested against the objection that most threatens it, which is that

the association reflects the child's effect on the parent rather than the reverse. The transactional considerations of §1.13 apply here with full force, and the literature has confronted them with longitudinal and genetically informative designs. The association survives in attenuated form.

The ontological question can now be put, and it has two parts, because this literature commits itself twice.

The first commitment concerns the parent. A style is a property of a parent. It is measured by questionnaire administered to parents or to children about parents, it is treated as stable across situations and across siblings, and it is reported as a type the parent belongs to. The parent, in this literature, is a bearer.

That may seem unremarkable and it is the point at which this book's difference from the literature is sharpest. A style so measured is a disposition the parent brings to the relation. The literature's own findings press against this: styles vary by child within a household, shift under economic pressure, and differ between a parent's conduct at six and at sixteen. Each of these is accommodated as moderation of a style rather than as evidence that what is being measured is a feature of a particular relation rather than a property of a person.

The second commitment concerns the child, and here the literature is entirely conventional. What the styles predict are outcomes located in the child: academic attainment, measured self-esteem, externalising behaviour, substance use. The dependent variables are properties of individuals throughout.

Proposition 1.16. *An account that classifies rearing by style locates a disposition in the parent and an outcome in the child, and describes the relation between them as a relation between two individuals each characterised independently. What such an account cannot represent is a manner of conduct that exists only within a particular relation and would not be found in the same parent with a different child.*

A further matter requires attention here and it is the point at which the neutrality commitment of this book does concrete work.

The style classification has been applied comparatively, and the comparative application has produced a recurring pattern: the association between authoritative rearing and measured outcomes is weaker, and sometimes absent, in samples outside the population where the classification was developed. Chao's work on Chinese-American households (Chao, 1994) proposed that the authoritarian category does not capture what those households are doing, that a distinct construct better describes it, and that the outcome pattern differs accordingly. Similar arguments have been made for African-American households, for households under conditions of material threat, and for several East and South Asian populations.

Two readings of this pattern are available. On the first, the classification is approximately correct and its association with outcomes is moderated by culture. On the second, the classification is a description of one arrangement, articulated in the terms that arrangement makes available, and its application elsewhere measures distance from that arrangement rather than any property of the households measured.

This book does not adjudicate between them here. [ch. ?? ch:comparison] takes up the question, since it is the general problem of comparative instruments rather than a local difficulty with this one. What should be recorded now is that the two readings are not empirically equivalent and that the literature has not consistently distinguished them.

One final observation about this literature's position in the wider culture. Of everything surveyed in this chapter, the style classification is the account that has travelled furthest from its origin, and it now circulates in forms Baumrind explicitly disowned, most often as a scale from strict to lenient with a recommended midpoint. [[ch. ?? ch:circulation](#)] examines that journey. The relevant point here is that a reader who arrives at this book holding a view about parenting styles is likely to hold a version of it that its author rejected.

The verbs. A parent *is* authoritative, *has* a style, *exhibits* warmth, *provides* structure. A child *shows* competence, *develops* self-regulation, *has* higher attainment. Both parties are bearers and the relation is the correlation between their properties.

1.18 The Staged Life

Two accounts remain that organise development as a sequence of tasks or positions, and they are treated together because their ontological structure is the same and because each is the standard reference in its area.

Erikson's psychosocial stages (Erikson, 1950) proposed that a life proceeds through a series of crises, each posing a tension whose resolution shapes what follows. Basic trust against mistrust in the first year, autonomy against shame, initiative against guilt, industry against inferiority, and beyond childhood the identity crisis for which he is most often cited. Two features of the account distinguish it from the psychoanalytic material of §1.10 from which it descends. The stages continue through adulthood, which was a departure. And each crisis is posed by an encounter between a developing person and a social institution: the caregiving arrangement, the household's demands, the school, the peer group, the occupational order.

The second feature is what earns Erikson a place in this survey. His stages are not maturational unfoldings, and the tension at each stage is generated by something outside the person. The account is more social than the tradition it came from and it says so.

Kohlberg's stages of moral reasoning (Kohlberg, 1981) proposed a sequence in which the grounds a person offers for a moral judgement change in a fixed order, from consequences to the self, through conformity to expectations and to law, toward reasoning from principles taken as general. The evidence was the reasoning people gave when presented with dilemmas, and the ordering was held to be invariant even where the rate of movement varies.

Gilligan's response (Gilligan, 1982) is part of the record and must be included. She argued that the scoring system registered one form of moral reasoning and read a different form as a lower stage, that the difference tracked how the person conceived their relation to others, and that an ethics organised around responsibility within relationships was being scored as a failure to reach an ethics organised around abstract rights. The empirical claims about sex differences that accompanied the argument have not fared well. The methodological claim has, and it is the one that matters here: a stage instrument scores what its designer took development to be moving toward.

The ontological structure of both accounts is the same and it is visible in the same place.

A stage is occupied by a person. The sequence is a sequence of positions through which a person passes, the person is what persists across the passage, and an assessment of stage assigns a person to a position. In Erikson the social is where the crisis comes from; the resolution is a quality the person carries forward, and his own vocabulary of virtues acquired at each

stage makes this explicit. In Kohlberg the reasoning is the person's, elicited from the person, and scored as the person's level.

Proposition 1.17. *A stage account requires a subject who occupies successive positions, since without such a subject there is nothing that has moved from one stage to the next. What is generated at each stage is described as a quality the subject thereafter carries.*

Gilligan's methodological point deserves one further remark, since it anticipates something this book will need. Her argument was that an instrument scoring moral development had encoded an answer to a question about what moral development is. That is the argument of §1.1.1 arriving from within the empirical literature, and it arrived there two decades before the comparative critique of attachment instruments made the same move. The book's treatment of instruments in [ch. ?? ch:instruments] is indebted to it.

1.19 The Educative Experience

Philosophy of education is a discipline of its own, with a literature that predates developmental psychology by a considerable margin and that has continued alongside it with surprisingly little traffic between them. Its central question is what education is for, and its answers rest on accounts of what a person is that are argued rather than assumed. This makes it unusually relevant to a chapter concerned with premises.

Dewey (Dewey, 1916, 1938) is the figure who matters most here, and the reason is that his position is relational in a sense close to this book's own.

His starting proposition is that experience is not something that happens inside a person. Experience, on his account, is a transaction between a living creature and its surroundings, and the two terms are specified by the transaction rather than prior to it. He was explicit that the word had been used to name a private mental episode and that this usage was the source of a long confusion. What a person undergoes and what a person does are the two phases of one process, and an experience in the full sense occurs when they are connected so that the doing is informed by the undergoing.

Education follows from this. It is the continuous reconstruction of experience, which means the reorganisation of the connections through which subsequent experience will be had. It has no end outside itself, a proposition Dewey defended at length against accounts on which education prepares for a later condition. Growth is his term for the process, and its criterion is whether it produces further capacity for growth: an education that produced a person with narrowed capacity for further education would have failed by the only standard available.

Two features of this deserve to be marked as close to the present book.

The transactional specification of experience does what the accounts examined in §1.13 do not quite manage. Dewey does not describe an organism and an environment influencing each other; he describes a single process of which each is an aspect. The formulation is philosophical rather than operational and the difference from the mutual-influence models is real.

And the criterion of growth is a criterion of the same form as the one this book will propose. Whether an arrangement produces further capacity for the process it belongs to is what [ch. ?? ch:stability] will use to distinguish two kinds of stable relation. Dewey arrived at the form of that criterion and applied it to a different object.

The remainder of the tradition can be treated more briefly. Herbart (Herbart, 1904), writing a century earlier, proposed that instruction should build on an apperceptive mass, the organised body of prior ideas through which new material is assimilated, and his followers turned this into a formal method that Dewey spent considerable effort dismantling. Peters (1966) and the analytic philosophy of education asked what conditions a process must satisfy to be called education at all, and proposed that it must transmit something worthwhile, in a manner involving the learner's understanding, and with breadth of cognitive perspective. Freire (Freire, 1970) proposed that education conducted as deposit into a passive recipient is a political arrangement rather than a pedagogical error, and that the alternative is a practice in which teacher and student jointly investigate a shared object. The capabilities approach, in Sen (1999) and Nussbaum (2011), proposed that what should be equalised is neither resources nor satisfaction but what a person is actually able to do and to be, and that education is among the conversion factors determining this.

The ontological question can now be put to the tradition, and the answer differs between its members in a way that is worth setting out rather than averaging.

Herbart and Peters locate straightforwardly. An apperceptive mass belongs to a learner; a cognitive perspective is possessed by an educated person; the conditions Peters specifies are conditions on what a person comes to have.

The capabilities approach is more interesting. A capability is what a person is able to do, and Sen's formulation makes it depend on conversion factors that include social arrangements. This is a property that is not fully in the person, and the approach is often read as relational for that reason. What remains is that a capability is predicated of a person: it is this person's ability, assessed by asking what this person could do. The account distributes the determinants of the property across the person and the arrangements, and does not distribute the property.

Freire is closest to the position this book will take, and closer than the reading his slogans suggest. His proposal is not that students should be active rather than passive. It is that the teacher and the student are both transformed in the joint investigation, that a teacher who is not so transformed has not taught, and that the relation between them is what produces the knowledge rather than what conveys it.

The formulation that matters most for this book concerns naming. On Freire's account a person is not a container into which an account of the world is placed, and the alternative he proposes is not that the person constructs the account alone. It is that the world is named jointly, that naming is what education consists of, and that a pedagogy conducted as deposit removes the possibility of it. A child, on this account, is a co-namer of the world rather than a recipient of names for it.

The proximity to what this book will argue is close enough that the difference requires stating. What Freire describes as occurring between a teacher and a student is the production of something neither party held, which is generation in the sense [ch. ?? ch:commitments] will make precise. Where the account stops short is in what it says the production yields: a critical consciousness, which is described as the student's own, and an awakening located in the person awakened. The relation produces, and what it produces is deposited after all, in the party the pedagogy was for.

Dewey is the hardest case in this section and requires the same care that §1.13 required.

The transactional account of experience genuinely refuses to locate experience inside a per-

son, and any reading that attributes such a location to him is a misreading. What can be observed is different and narrower. Growth, in Dewey's account, is growth of the creature. Habits are the organised dispositions through which subsequent transactions are conducted, and habits are the creature's; he says so directly and builds much of his ethics on it. The transaction is not located in the organism, and what the transaction leaves behind is.

Proposition 1.18. *An account on which experience is a transaction between creature and surroundings may decline to locate the experience in either term and still locate what the transaction produces. Where the product is a habit, a capability, or a consciousness, it is predicated of the creature, and the relational specification of the process has not carried through to its result.*

One further observation about this tradition's position in the survey. Of everything examined in this chapter it is the least read by developmental researchers, and the neglect is mutual: philosophy of education cites developmental psychology sparingly and usually at second hand. The separation is a fact about disciplinary history rather than about the subjects, and [ch. ?? ch:historical] takes up how it came about. This book draws on both and treats the separation as an accident to be repaired rather than a boundary to be respected.

1.20 The Disciplined Subject

The account examined here is the most direct challenge in this survey to what this book proposes to do, and it is set out at length for that reason. A survey that omitted the strongest objection to its own author's programme would be worth less than one that included it.

Foucault's argument (Foucault, 1977) concerns how power operates in modern institutions, and its relevance here is that the institutions he analysed include the school and that his central mechanism is one that produces subjects.

Discipline, in his account, is a technique (Foucault, 1977) rather than a prohibition. It works by distributing bodies in space, by partitioning time into segments with prescribed activities, by arranging individuals in ranked series, and by subjecting them to continuous observation. The school appears in his analysis alongside the barracks, the workshop, and the hospital, and he treats their convergence of form as the finding: institutions with quite different purposes arrived at the same techniques within a few decades of one another.

The examination is where the argument becomes specific to this book's concerns. An examination combines observation with normalising judgement. It renders each individual visible in a way that permits comparison, it produces a record, and the accumulated records constitute individuals as describable cases. Foucault's claim about this is precise and radical: the examination does not measure a pre-existing individuality but is among the procedures by which individuality is constituted as an object of knowledge. Before the apparatus, there is no fact of the matter about where a child stands in a distribution, because there is no distribution.

Normalisation follows. A norm is established by the distribution of measured cases, deviation from it is made visible and correctable, and the correction is administered as care rather than as punishment. The subject produced is one who monitors their own position relative to the norm.

Governmentality, in the later work (Foucault, 2007), extends this beyond enclosed institutions. Government in this sense is the conduct of conduct: the shaping of the field of possible

action of others, exercised through their freedom rather than against it. A parent who is supplied with developmental milestones, screening schedules, and guidance about what a child of a given age should be doing is being governed in this sense, and the government operates by making certain courses of action appear as the obvious ones to a parent who wants what is best.

Three observations about this account before its difficulty for this book is stated.

It is not a theory of development and does not claim to be. Foucault has nothing to say about how a two-year-old comes to speak. What he supplies is an account of the institutional apparatus within which such questions came to be asked and answered, and of what the apparatus does to those it examines.

It applies to the entire survey conducted in this chapter. Every account examined above generated instruments, the instruments generated records, and the records constituted populations of comparable cases. The developmental norm, the percentile, and the screening threshold are all products of the machinery Foucault describes, and none of the traditions that produced them treats this as part of its subject matter.

And it is not a claim that the measures are false. The child at the third percentile is at the third percentile. What is at issue is what kind of fact that is and what it becomes when a parent, a teacher, and a clinician all orient to it.

The difficulty for this book can now be stated, and it should be stated in its strongest form rather than deflected.

[**ch. ?? ch:models**] proposes a set of relational observables and argues that a household's generative condition can be assessed. If Foucault is right about examination, then such an apparatus would not measure a pre-existing property of households. It would constitute households as cases in a distribution, produce a norm of relational health, and render deviation from that norm visible and correctable. The parents so measured would come to monitor their own position relative to the norm, and the monitoring would be experienced as concern for their children rather than as subjection. The apparatus would produce exactly the phenomenon it was designed to detect, and it would do so while remaining, at every point, accurate.

This is not a general objection to measurement that a methodological remark could answer. It is the specific prediction that a relational measure would relationally deform what it measures, and the prediction follows from the argument this book itself makes about symbols and indices in Parts III and V.

Two things are worth saying about how the book responds, and neither is a refutation.

The first is that the objection is registered rather than answered. [**ch. ?? ch:instrument-critique**] is given to it, and the chapter concludes without resolving it. Any reader who finds the response inadequate has located a real weakness rather than a presentational one.

The second is that Foucault's account, applied consistently, presents a difficulty for itself in this domain. If every apparatus of knowledge about children constitutes what it examines, then the absence of such apparatus does not leave a household unconstituted. It leaves it constituted by whatever else operates there, which in the case of a family is the grammar examined in [**ch. ?? ch:transmission**]. The choice is not between an examined household and an unexamined one.

Proposition 1.19. *An apparatus that renders a relation visible, comparable, and correctable participates in producing what it renders. This holds for relational instruments as fully as for*

individual ones, and it does not distinguish between accurate and inaccurate apparatus.

The verbs in this tradition are the only ones in the survey that take the child as a product rather than a bearer. A subject *is constituted*, an individual *is produced* as a case, a body *is rendered* docile, conduct *is conducted*. Nothing is possessed. What replaces possession is production, and the producer is an apparatus rather than a relation, which is where this book's account differs.

1.21 The Warranted Practice

A body of work remains that is not a theory of development and that governs more contemporary practice than any theory surveyed above. It presents itself under the description of evidence-based parenting, and its claim is procedural rather than substantive: that recommendations to parents should rest on findings from controlled studies, and that recommendations resting on anything else should be discounted.

The programme has produced a considerable literature. Parenting interventions with manualised content have been tested in randomised trials, several have shown effects on measured child behaviour that persist beyond the intervention, and meta-analytic summaries have identified components that recur across the effective ones. Home-visiting programmes for households under material strain have been evaluated at scale. Guidance issued by paediatric bodies and by health ministries increasingly cites this literature and identifies itself as resting on it.

Two features of the programme deserve statement before its premises are examined, and the first is a real achievement.

The programme supplies a mechanism by which a recommendation can be withdrawn. Advice to parents has historically circulated on the authority of whoever issued it, has reversed repeatedly, and has reversed without acknowledgement. The requirement that a recommendation cite something answerable to observation makes the reversal traceable, and a field that can be shown to have been wrong is in better condition than one that cannot.

The second is that the programme is not a theory and does not claim to be. Its practitioners are frequently explicit that they are agnostic about mechanism and interested in whether something works.

The ontological question therefore has to be put differently here than elsewhere in this chapter. The programme carries no commitment of its own about what a child is. What it carries is a commitment about what counts as a warrant, and that commitment has consequences for what can be recommended.

An intervention is evaluated against an outcome, and an outcome must be measured. What is measurable in a randomised trial of a parenting programme is a behaviour of a child, a score on an instrument administered to a parent, or an observer's coding of a recorded interaction. Each is a property of an individual or a coded event, and each is selected for measurability. The programme therefore inherits, without adopting, the ontology of whatever instrument supplied its outcome, and the instruments were built by the traditions surveyed above.

This is the point at which §1.1.1 bites. A programme that is agnostic about mechanism is not thereby agnostic about ontology, because its outcome measures are not agnostic. An intervention that improved a relation without improving any measured property of either party would register as ineffective. Whether such interventions exist is a question the programme's

design cannot ask.

Proposition 1.20. *A methodology that evaluates practices against measured outcomes takes on the ontological commitments of its outcome measures. Agnosticism about mechanism is compatible with a determinate commitment about what is to be measured, and the second is not neutral.*

Three further difficulties belong to the record and are acknowledged within the literature itself.

The programme evaluates what can be manualised. An intervention must be specifiable in advance to be tested, which selects for practices that can be described as procedures, and a great deal of what passes between a parent and a child is not of that kind. The result is that the evidence base is denser for what is proceduralisable, and its density is read as though it reflected importance.

Effects attenuate with distance from the trial. Programmes that perform well under supervision perform less well when disseminated, and the gap is a subject of study in its own right. What this book takes from the finding is stated in [[ch. ?? ch:practice-norms](#)]: a practice that requires supervision to survive may be a practice whose operation depends on a relation that supervision supplied.

The programme's authority in public discourse exceeds its warrant. A recommendation may be described as evidence-based when the evidence bears on a narrower claim, on a different population, or on a shorter horizon than the recommendation implies. This is not a defect of the programme, which generally states its own limits with care. It is a fact about how the description travels, and [[ch. ?? ch:circulation](#)] takes it up.

One further observation completes the section. The programme and the traditions of §1.22 present themselves as opposed, and the opposition is the shape most contemporary argument about rearing takes: warranted findings against inherited practice. Each side describes the other as its deficiency, one as unwarranted custom and the other as thin technique. §1.27 argues that the opposition is real, that neither side can be dissolved into the other, and that the relation between them is where this book locates its own method.

1.22 The Formation Traditions

The accounts surveyed to this point explain. They propose what a child is and what governs the changes a child undergoes, and their claims are answerable, at least in principle, to evidence about children. The traditions examined in this section do something else. They specify what a rearing adult or an educating institution should aim at, and they proceed from an account of what a well-formed person is rather than toward one.

This makes them a different kind of object and they are treated together for that reason. Grouping the Confucian formation tradition with the European child-centred tradition would be unwarranted if the criterion were content, since their contents are opposed on nearly every point at which they can be compared. The criterion is structural. Each specifies an ideal, each treats the work of rearing as the approach to that ideal, and each therefore contains a picture of what a child is that is derived from what the child is to become.

1.22.1 The Status of an Ideal

A remark on method is required before either tradition is described, and it is the point at which the commitment stated in the preface does concrete work.

A formation tradition is a response to conditions. It arises in a society with a particular structure of positions, a particular distribution of the means of securing them, and a particular arrangement of who may compete for what. It specifies a person suited to those conditions, and the suitability is not a defect in it. An account of formation that specified a person unfitted to any available way of living would not have been adopted by anyone.

Two consequences follow for how such traditions can be treated here.

The first is that a tradition's own description of what it does is evidence about the tradition and is not a finding about what the tradition accomplishes. Every formation tradition describes itself as cultivating what is best in a person. The self-descriptions are sincere, they are frequently eloquent, and they cannot be used to settle what the practices they name actually produce. This applies symmetrically. A tradition's most attractive self-account and its critics' least attractive characterisation stand in the same evidential relation to the practice, which is to say a weak one.

The second is that a tradition cannot be assessed against another tradition's ideal without the assessment being decided in advance. To ask whether a formation tradition produces autonomous individuals is to have chosen an ideal from one tradition and applied it to another. To ask whether a child-centred arrangement produces persons capable of sustaining obligation is the same operation conducted in the other direction. Both questions are answerable and neither is neutral, and this book asks neither.

What can be asked is narrower and it is the chapter's own question. Each tradition presupposes something about what a child is. That presupposition can be brought into view, and bringing it into view requires no judgement about whether the tradition's aims are worth having.

1.22.2 The Cultivated Person

The Confucian tradition of formation, in its classical statements and in the long institutional history that followed, holds that a person becomes fully a person through cultivation, that cultivation proceeds through practice rather than through instruction alone, and that its content is supplied by relations already structured: to parents, to siblings, to teachers, to rulers, to those who came before. Learning is not the acquisition of information about how to conduct oneself. It is the repeated conduct of oneself, in specific relations, until the conduct is one's own.

Several features distinguish this from the accounts surveyed earlier and they deserve to be stated precisely.

Relations are not the setting of formation on this account. They are its content. What one becomes is constituted by the positions one occupies and by the manner of occupying them, and there is no residual person underneath who occupies them well or badly. The tradition possesses a rich vocabulary for the qualities of a relation and comparatively little for a self apart from relations, and this is a feature of its ontology rather than a gap in its psychology.

Formation is understood to be lifelong and to have no terminal state. An adult is not formed

and thereafter finished. The teacher is also cultivating, the parent is also cultivating, and the asymmetry between them and the child is an asymmetry of position within a shared process rather than a difference between one party who has arrived and another who has not.

The tradition also holds, in its dominant statements, that what cultivation develops is present in some form beforehand. The classical debate on whether that beforehand is favourable or unfavourable ran for centuries and was never settled, and the disagreement matters less here than what both sides assumed: that there is something in the person that cultivation works upon.

That assumption is where the chapter's question lands. Cultivation, on this account, requires a material to cultivate. The tradition's own metaphors are agricultural and horticultural, and a plant is a thing with a nature that conditions can serve or fail. What the tradition locates in the child is not a scheme or a capacity, and the difference from the developmental accounts is real. What it locates is a person-in-forma who is the subject of the cultivating, and who therefore precedes it.

Proposition 1.21. *An account on which a person is formed through cultivation requires a subject who undergoes the cultivation. The relational content of that account does not by itself displace the subject, since the relations are described as those in which the subject stands.*

A second observation concerns the institutional history and is included because the chapter's method requires it. The tradition became, over a long period, the content of an examination system, and the examination system became the principal route to position. This is not a corruption of the tradition to be set aside before examining it. It is a fact about the conditions under which the tradition was transmitted, and the transmission shaped what was transmitted. [ch. ?? ch:historical] takes this up, together with the parallel question about the European traditions, whose institutional histories are equally consequential and equally seldom examined by their adherents.

1.22.3 The Released Nature

The last position in this survey differs from the others in kind. Piaget, Vygotsky, Bowlby, and the behaviourists each produced a research programme with a specifiable mechanism. What is examined here is a family of commitments held across several traditions that share no common apparatus and frequently disagree with one another. Rousseau stands behind all of them without belonging to any. Montessori built an institution and a method. Steiner built a different one on different metaphysics. The progressive tradition in its various national forms shares the family resemblance without the metaphysics. Contemporary discourse carries the commitment in a diluted form that no longer names its ancestors, in phrases about following the child, honouring the child's nature, and refraining from interference with a process that would otherwise unfold well.

The commitment they share can be stated in a sentence. There is something in the child that is complete, and the work of education is to protect the conditions under which it can emerge.

The sentence has two parts and they are separable. The second part is a claim about pedagogy and much of it is defensible. Environments can be arranged so that a child's own activity is the engine of what happens; instruction can be withheld at moments when withholding

produces more than supplying would; a prepared environment can accomplish what direct teaching cannot. Montessori demonstrated a great deal of this and the demonstration has held up. Whatever is concluded about the metaphysics, the pedagogical findings are findings.

The first part is a claim about what a child is, and it is the reason this position appears in a chapter on ontological premises. Something complete is present, and it is prior to any relation the child enters. Development is its emergence. Interference is what obstructs the emergence. On this account the fundamental risk in rearing a child is doing too much, and the fundamental virtue is restraint.

Consider what follows for the status of the relation. If what develops is already there in the child, then the adult's role is custodial. The adult supplies conditions, removes obstacles, and stands back. The relation is an environment surrounding a process rather than a participant in it. This is stated explicitly in some of the traditions and implied in the rest, and it produces a characteristic silence: these accounts have a great deal to say about what an adult should refrain from and comparatively little about what an adult contributes, because on their own premises the contribution is negative.

The position is generous in intention and its intention is worth honouring. It arose against practices that were coercive and often cruel, it has consistently defended children against instrumentalisation, and its instinct that a child is owed something prior to what the child produces is an instinct this book shares and will argue for at length in [[ch. ?? ch:recognition-prior](#)]. The disagreement is about what grounds the instinct.

Two difficulties are worth stating.

The first concerns the completeness itself. A nature that unfolds must be specified before the unfolding, since otherwise there is no fact about what would have emerged had conditions been right. Yet the specification is never available. When a child develops in an unexpected direction, the tradition can describe this as the nature having been obstructed or as the nature having been other than assumed, and there is no procedure for deciding between these. The claim thereby loses contact with anything that could bear on it. This is a familiar difficulty with accounts of a hidden nature and it is not peculiar to education.

The second is closer to this book's concerns. An account built on protection has no way to distinguish two conditions that present identically. A child left alone in a prepared environment and a child left alone in a household that has ceased to respond are both, from the standpoint of non-interference, unobstructed. The tradition's vocabulary contains a term for excessive intervention and no term for withdrawn response, since withdrawn response registers as the absence of interference. The situation examined in [[ch. ?? ch:silence](#)], in which what injures a child is precisely that nothing is being done, cannot be stated in this vocabulary at all.

Proposition 1.22. *An account on which development is the emergence of what is already present has a term for interference and no term for the withdrawal of relation, since the withdrawal of relation satisfies the account's own condition for development proceeding well.*

The verbs are the gentlest in the chapter and locate as firmly as any. A child *unfolds*, *blossoms*, *realises* a potential, *becomes* what the child was. The last construction is worth pausing over. To become what one was requires that one was it, and the tense carries the whole ontology: what appears at the end was present at the beginning, and the interval added nothing that was not

already there.

This is the position the present book departs from most sharply, and the departure is not in the direction one might expect. The disagreement is not that children require more intervention than the tradition allows. It is that the alternative to intervention is a relation rather than an absence, and that a child left unobstructed in a field where nothing responds is not thereby left free.

1.22.4 The Shared Premise

The two traditions examined above specify opposed ideals. One holds that a person is completed through the assumption of relational positions and that this is the work of a lifetime. The other holds that a person is present at the outset and that the work is to avoid obstructing what would emerge. Set beside each other the disagreement appears total.

They agree on the point this chapter is asking about.

Both require a subject who is there before the formation begins. The cultivating tradition requires it because cultivation must have something to work on, and the tradition's own agricultural figures make this explicit. The releasing tradition requires it because what is released must have been present to be released. The two disagree about what should be done with the subject and about how much should be done, and they do not disagree about whether there is one.

This is worth stating because the two traditions are frequently taken to exhaust the available positions on rearing, and a great deal of contemporary argument consists of choosing between them or seeking a balance. A balance between an account requiring a prior subject and another account requiring a prior subject settles nothing about whether there is one.

Proposition 1.23. *The formation traditions divide on how much should be done to a child and share the premise that there is a child to whom it is done. A position between them inherits the premise entire.*

One further note, and it concerns what these traditions have that the explanatory accounts lack. Each possesses a developed vocabulary for the conduct of an adult in the presence of a child, and each treats that conduct as a subject worth centuries of attention. Nothing comparable exists in the developmental literature, which describes what happens to children and grows terse when asked what a person should do on a particular evening. [**ch. ?? ch:practice-norms**] returns to this, since the book's own practical chapters face the same difficulty and will draw on these traditions for the form of the problem while declining their answers.

1.23 The Excluded Literatures

A survey that named nine traditions has passed over others, and some of the omissions would be noticed. Each is stated below with its reason. An omission with a reason attached is a boundary of the argument; an omission without one is a gap, and the difference matters to what the chapter can claim.

Behaviour genetics is the largest of the exclusions. Twin and adoption designs have established that measured variation in nearly every psychological characteristic is partly associated with genetic variation, that shared family environment accounts for less of the variance in

many outcomes than had been assumed, and that these findings replicate. The literature is substantial and the exclusion is not a judgement about its quality.

It is excluded because its object is different in a way that makes it unavailable for the chapter's question. A heritability estimate is a statement about the sources of variance in a population under a particular range of conditions. It is not a statement about how any characteristic came to be in any individual, and it does not become one when the population is described. The chapter has been asking what an account takes to bear a developing property. A variance decomposition takes nothing to bear anything; it partitions a distribution. The exclusion therefore reflects a difference of object rather than a disagreement. [[ch.?? ch:models](#)] returns to the relation between population-level and individual-level statements, since the empirical programme proposed there is exposed to the same distinction.

Comparative and evolutionary work is excluded for a related reason. Studies of rearing in other species, and of what human childhood may be for in evolutionary terms, address the question of why a developmental arrangement exists at all. The extended human juvenile period, the involvement of parties other than the mother in provisioning, and the comparative rarity of both are real findings and bear on any complete account. What such work explains is the presence of an arrangement across a species. What this chapter asks is what happens within one instance of it. The two questions are compatible and the answers to one do not constrain the answers to the other as directly as is sometimes supposed.

Educational effectiveness research is excluded on different grounds. This literature asks which arrangements produce which measured outcomes, and it has produced findings that bear on decisions institutions have to make. Its exclusion here follows from the taxonomy of §1.2.1. Effectiveness research takes an outcome as given and asks what produces it. The present chapter asks what a theory takes a child to be, and an effectiveness study need take no position on that in order to be conducted well. Where such research does carry an ontological commitment, it carries the commitment of whatever theory supplied its outcome measure, and those theories have been examined above.

Four further bodies of work are passed over and each would be noticed by a specialist.

The neo-Piagetian accounts of Case, Pascual-Leone, and Halford retained the stage structure while proposing a processing constraint as its mechanism, most often a limit on how many elements can be held in relation at once. The proposal is serious and the exclusion is on grounds of redundancy for this chapter's purpose: the constraint is located in the child, and the ontological commitment is that of §1.3 with a different mechanism supplied.

Connectionist and neuroconstructivist work, in Elman, Karmiloff-Smith, and Johnson, proposed that structure emerges from architecture and input rather than being specified in advance, and constitutes the most substantial challenge to the nativist account examined in §1.6. It is excluded here because its dispute with nativism concerns how much must be built in, and both parties to that dispute locate what develops in the same place.

The literature on temperament, from Thomas and Chess through Kagan and Rothbart, established that infants differ from the first weeks in reactivity and regulation, and that some of this is stable. It is excluded because a temperament is by construction a property of an individual, and the literature makes no claim to the contrary.

Developmental psychopathology, in Rutter, Cicchetti, and the resilience literature, established that the same condition produces divergent outcomes, that adaptation under adversity

is common rather than exceptional, and that developmental pathways branch. This is close to several of this book's concerns and is excluded here because its unit is a pathway through a life, which is a different object from the one this chapter examines. [[ch. ?? ch:reading-development](#)] draws on it.

Three smaller exclusions can be stated more briefly. The clinical literature on developmental conditions is not surveyed, since its concepts are organised around difference from a typical course and the question of what that course consists of is prior. Media and technology effects research is not surveyed, since it is a literature about a class of inputs rather than an account of development. The history of childhood as a social category, which includes work of the first importance, is not surveyed here because it belongs to [[ch. ?? ch:historical](#)] and is treated there at length.

Proposition 1.24. *An account may be omitted from a survey because its object differs from the survey's question. Such an omission constrains what the survey can claim and does not weaken the claim it makes within its stated range.*

One exclusion of a different kind should be recorded. The chapter has not surveyed the popular literature of rearing advice, which is by volume the largest body of writing on this subject and by influence probably the most consequential. It is not examined here because it does not, in general, contain accounts of the kind this chapter examines. Where it rests on a theory, the theory is one of those surveyed above, usually at some remove and often with the qualifications removed in transit. That process of removal is itself a subject, and [[ch. ?? ch:circulation](#)] takes it up.

1.24 The Ledger of the Survey

Before the synthesis, an accounting. Each tradition examined above has established something that a reader of this book should continue to believe, and each reaches a limit that is a limit of its apparatus rather than a failure of its practitioners. This section sets both out together, since a survey that recorded only the limits would have misrepresented what it surveyed.

The accounting has a further purpose. Several of these traditions will be drawn on later in this book, and drawn on for their findings while their framing is declined. A reader is entitled to know in advance which is which.

1.24.1 The Achievements

The constructivist account established that children's errors are systematic, that a child's reasoning has a form of its own rather than being an incomplete version of an adult's, and that this form can be described. It also established that a child's own activity on the world is a condition of understanding it, which no subsequent account has withdrawn.

The sociocultural account established that a psychological function can originate outside the individual, that assisted performance and independent performance are different measures with different uses, and that instruction operates on the difference between them. The general law of cultural development remains the strongest single statement in the literature that the social is prior in the order of formation.

The shared-intentionality account established that human infants enter joint states with others in a manner that comparative evidence does not find elsewhere, that this appears early, and that the elementary forms of it can be observed and measured. It supplied the field's most careful description of what two parties attending to a third thing are doing.

The core knowledge account (Spelke and Kinzler, 2007; Carey, 2009) established that a newborn mind is not undifferentiated, that specific representational competences are present far earlier than had been supposed, and that a poverty-of-stimulus (Chomsky, 1965) argument constrains any account on which a mind is assembled from what reaches it. Its methods made the study of preverbal infants possible.

The dynamic systems account established that developmental change can arise from the interaction of components without a controller, that variability carries information rather than being error, that stages are results requiring explanation rather than explanations, and that context is a constituent of behaviour rather than an influence on it. It also supplied the field's formal apparatus.

The ecological tradition established that a setting a child never enters can shape what the child becomes, that the relation between two settings is a level of its own, and that the recurring reciprocal interactions of daily life are where development is transacted. Its cross-cultural branch established that what children do all day varies enormously with productive arrangements, and that a caretaker's beliefs about what a child is form part of the developmental environment.

The attachment account established the caregiving relation as an object of systematic study, produced an observational method that has held for six decades across many populations, and demonstrated that the quality of early care has consequences that are measurable and durable. It displaced the accounts on which the tie derived from feeding.

The psychoanalytic tradition established that early relations form a person in ways inaccessible to that person, that what a mind contains has a relational structure, and that a caregiver performs functions the infant later performs alone. In Winnicott it produced the closest existing statement of a relational constitution of the subject.

The behaviourist account established that behaviour is sensitive to its consequences, that this sensitivity is powerful enough to support interventions that work, and that a great deal of what appears to require explanation in terms of inner states can be produced without invoking them.

The social learning account established that behaviour is acquired by observation without arranged consequence, that this is the mode by which most of what passes between a parent and a child passes, and that a person's judgement of their own capacity governs what they attempt and how they read failure.

The transactional tradition established that developmental outcomes are produced by continuous mutual influence, that a correlation between parental and child behaviour is uninformative about direction, that interventions on one party alone underperform, and that the withdrawal of a caregiver's responsiveness produces rapid and specific disorganisation in an infant of a few months.

The neural account established that early experience leaves physical traces, that the developing brain is organised by identifiable processes on identifiable schedules, and that severe deprivation has consequences at the level of tissue. It supplies the substrate constraint any

developmental account must respect.

The reproduction traditions established that the correlation between a household's position and its children's is substantial and resistant to intervention, that schooling participates in producing this rather than merely failing to prevent it, that what is transmitted includes competences institutions read as ability, and that the labour of rearing is labour with material conditions.

The parenting-styles literature established that adult conduct in rearing can be classified on two dimensions rather than one, that demand and response are separable, that the resulting classification predicts a wide range of outcomes, and that the prediction survives when the child's own effect on the parent is controlled.

The stage accounts established that developmental tasks can be posed by encounters with institutions rather than by maturation alone, that the grounds a person offers for a moral judgement change in a describable order, and, through Gilligan's response to Kohlberg, that an instrument scoring development encodes an answer to the question of what development moves toward.

The evidence-based programme established that a recommendation to parents can be made answerable to observation, that a reversal of advice can thereby be made traceable, that several manualised interventions produce effects surviving the intervention, and that effects attenuate on dissemination in a manner that is itself informative.

Philosophy of education established that experience admits a transactional specification in which creature and surroundings are aspects of one process, that education has a criterion internal to itself in whether it produces further capacity for education, and that a pedagogy conducted as deposit into a passive recipient is a political arrangement rather than a technical error.

The contemporary lines of the reproduction tradition established that reification renders a relation between people as a property of a thing, that a household's political formation is a subject admitting study, that instrumental reason reduces questions of ends to questions of means, that affective labour does not stop at a working day's end, that the separation of reproductive from productive labour was historically accomplished rather than given, and that a person raised under subordination internalises a description supplied by the party that subordinates.

The disciplinary analysis established that the school converged in form with other institutions of the same period, that examination combines observation with normalising judgement, that the accumulated records of examination constitute individuals as comparable cases, and that government in the modern sense operates through the freedom of the governed rather than against it.

The formation traditions established, over far longer periods than any of the above, that the conduct of an adult in the presence of a child is a subject admitting sustained and disciplined attention. They possess vocabularies for that conduct which the explanatory literatures lack entirely.

1.24.2 The Limits

Each limit below is stated as a limit of what the apparatus can express. None is offered as a mistake, and in most cases the limit is the price of a strength named above.

The third column of Table 1.2 is the one that matters most for how this book proceeds. A limit that is the price of a strength cannot be removed by adjusting the account, since removing it would remove what the account was built to deliver. Attachment theory could describe a relation as something other than a type only by giving up the instrument that made it a research programme. The dynamic tradition could dispense with prior components only by giving up the formalism. These are not defects awaiting repair by a more careful practitioner.

Proposition 1.25. *Where an account's limit is the price of the strength that defines it, the limit cannot be removed within that account. An alternative must be constructed rather than an adjustment proposed.*

1.24.3 What This Book Retains

Three of these traditions supply material this book uses directly, and the use should be declared now rather than discovered later.

The dynamic systems tradition supplies the vocabulary of stability, attractors, transitions, and the informational value of variability. [ch. ?? ch:models] works within that vocabulary and disputes what the state space is a space of.

The psychoanalytic tradition, in Winnicott and in Lacan, supplies formulations this book builds on directly: that the unit which exists is not the infant, and that a subject is constituted under an address it does not author. The framing of both as accounts of what a person comes to contain is declined.

The transactional tradition supplies the empirical warrant for the propositions of [ch. ?? ch:absorption] concerning the reversal of direction within a relation, and its still-face procedure is the closest existing experimental study of what [ch. ?? ch:silence] examines. Its requirement of initial states is declined.

The reproduction traditions supply the commitment that rearing has material conditions and that a household is not sealed from the structure it stands in. Their transmission model is declined and [ch. ?? ch:transmission] states the alternative. The extension proposed in §1.16.9, on which a household both reproduces a structure and may generate one, is the book's principal debt to this tradition and its principal departure from it.

The disciplinary analysis supplies an objection rather than a resource, and the objection is retained at full strength. [ch. ?? ch:instrument-critique] is given to it and does not dispose of it. A reader who concludes that the empirical programme of [ch. ?? ch:models] cannot survive that objection has reached a conclusion this book regards as open.

From the remaining traditions this book takes findings and declines apparatus. It has no quarrel with any of the findings named in §1.24.1, and a reader who accepts all of them can still find the argument of the following chapters open.

1. The Ontological Premises of Theories of Development

Account	The limit of its apparatus	The price of
Constructivist	No term for what an encounter produces between the parties	An internal logic of development
Sociocultural	Internalisation requires a prior location; no term for the adult's transformation	A mechanism with a direction
Shared intentionality	Grounds the relation in a capacity for relation	Comparative testability
Core knowledge	Endowment prior to relation is unfalsifiable by developmental evidence	Explaining early competence
Dynamic systems	Components must be specifiable before the interaction	Formal tractability
Ecological systems	A nested figure requires a centre, and the child occupies it	Locating the surround
Attachment	Returns a relation in the logical form of a property	An operational instrument
Psychoanalytic	What begins between finishes within; evidence settles little	Access to what cannot be observed
Behaviourist	No term whose loss constitutes degradation	Exhaustive observability
Social learning	An interior added in the same location as the repertoire	Explaining unreinforced acquisition
Transactional	Requires initial states for both parties	Formal specifiability
Neural	Locates in tissue of one organism; registers trace, not circumstance	Physical determinacy
Social reproduction	Relocates the cause, retains the bearer; no term for generation	Explaining a distribution
Warranted practice	Inherits the ontology of its outcome measures	Traceable revision
Educational philosophy	The transaction is not located; its product is	Refusing a private experience
Disciplinary analysis	Supplies no account of development; leaves no alternative standing	Seeing the apparatus whole
Parenting styles	A style is a property of a parent, not of a relation	An instrument that travels
Stage accounts	A subject must occupy the successive positions	An ordered sequence
Formation traditions	Requires a subject present before formation	Specifying an ideal

Table 1.2: The limits, each paired with the strength that produces it.

1.25 The Common Boundary

Nineteen bodies of work have been examined and they disagree with one another about nearly everything that can be disagreed about. They differ on whether development has stages, on whether its engine is internal or supplied, on whether structure is endowed or assembled, on whether the child is active or acted upon, on where the causes of a trajectory are located, on what an adult should do, and on what would count as evidence for any of it. The disagreements are substantive and have been prosecuted for a century.

What this section proposes is that they arrive at approximately the same boundary, and that the boundary is intelligible in terms of a commitment they hold in common while disagreeing about everything built upon it.

1.25.1 The Common Location

The commitment is that there is a child, that the child is the bearer of whatever develops, and that a relation is a condition under which the bearing proceeds.

Everything else varies. What is borne may be a scheme, an internalised function, a capacity for shared intention, an endowed system of representation, a position in a state space, a classified security, an internal object, a repertoire, a quantity of neural tissue, a stock of transmitted capital, or a cultivated character. How the relation conditions the bearing may be by supplying resistance, by supplying form, by supplying an occasion for joint attention, by selecting among options already enumerated, by entering as one component among others, by supplying protection, by holding what cannot yet be borne, by supplying contingency, by leaving a physical trace, by transmitting a position, or by refraining from interference. The bearer does not vary, and the relation's standing as a condition rather than a constituent does not vary.

The boundary each account reaches follows from the commitment and can be stated in a single form. Each has resources to describe what happens to a bearer under conditions. None has resources to describe the generation of the bearer.

The instances are worth recalling in compressed form, since the compression is what makes the pattern visible. The constructivist account explains how a structure held by a subject reorganises under encounter, and begins from the subject holding structures. The sociocultural account explains how a function moves from one party to another, and requires that the function have had a prior location. The shared-intentionality account explains why joint states are available to human infants, and grounds their availability in a capacity those infants have. The core knowledge account explains what a mind begins with, and locates the beginning before any relation. The dynamic account explains how pattern emerges from interacting components, and requires the components to be specifiable in advance. The ecological account explains how a surround reaches a child, and places the child at the centre of the figure. The social learning account explains acquisition without arranged consequence, and locates the acquired representation in the observer. The transactional account explains outcomes as products of mutual influence, and requires two parties to begin. The style literature explains which adult conduct predicts which outcomes, and characterises both parties independently. The stage accounts explain an ordered sequence, and require someone to occupy the positions. The evidence-based programme establishes which practices predict which measured outcomes, and takes its outcomes from instruments built elsewhere. The educational philosophies explain what

Account	The borne property	Office of the relation
Constructivist	Schemes, operations	Occasion of disequilibrium
Sociocultural	Higher functions	Prior site, then channel
Shared intentionality	A capacity for joint states	Exercise of that capacity
Ecological systems	Dispositions, resources, demands	Nested surround
Core knowledge	Endowed representational systems	Trigger and selector
Dynamic systems	A position in a state space	Component among components
Attachment	Security; a working model	Object of a system; classified type
Psychoanalytic	Objects; a self; a capacity to think	Holding, containment, address
Behaviourist	A repertoire	Arranger of contingency
Social learning	Representations, self-efficacy	Model to be observed
Transactional	A state at each moment	Continuous mutual influence
Neural	Properties of tissue	Source of a physical trace
Social reproduction	Capital, habitus, a code	Channel of transmission
Warranted practice	An outcome, as measured	Manipulable input
Educational philosophy	A habit; a capability	Transaction, or joint investigation
Disciplinary analysis	Nothing borne; a case produced	Apparatus that constitutes
Parenting styles	A style; an outcome	Correlation of two properties
Stage accounts	A position in a sequence	Poser of the crisis
Formation traditions	A character; a nature	Cultivating or non-interfering

Table 1.3: The common location. The borne property varies and the office of the relation varies; that a bearer is named does not.

education is for, and predicate its product of the person educated. The disciplinary analysis explains how an apparatus produces the cases it examines, and offers no account of what develops. The attachment account explains what characteristics a relation exhibits, and returns them in the logical form of a property. The psychoanalytic account explains how a self is constituted in early care, and describes what begins between two parties as finishing in one. The behaviourist account explains how a surface is shaped, and admits nothing besides the shaping's record. The neural account measures a trace, and measures it in tissue belonging to one organism. The reproduction account explains how position is transmitted, and leaves the child as the destination. The formation traditions specify what a person should become, and require someone already there to become it.

Each is a real explanation and each stops at the same place.

1.25.2 The Difficult Cases

Three of the eleven strain this reading and are worth handling separately, since a survey that absorbed them without difficulty would have proved less than it claimed.

The psychoanalytic tradition contains, in Winnicott's ontological remark, a statement of the position this book will defend. If the reading offered above is right, the tradition possessed the insight and did not build on it, and what it built instead was an account of how the products of early care come to reside in a person. The evidence for this is the tradition's own vocabulary of achievement: a capacity to be alone, an apparatus for thinking, a depressive position attained. Whether Winnicott himself is best read this way is a question a specialist may reasonably contest, and the contest would not affect the chapter's finding about the tradition as it developed.

The dynamic systems tradition is the closest in method and its components are the difficulty. A reader may object that a component-based account is not a bearer-based account, since no single component bears the emergent pattern. The objection is well taken and the reply is that the components are themselves specified as bearers of the properties that enter the interaction: a mass, an arousal level, a neural state. What the tradition abolished was a single privileged bearer. What it retained was a description of the world as populated by things with properties, standing in relations to one another.

The reproduction traditions are the hardest case and the one that most repays attention. They locate the cause of a child's trajectory entirely outside both the child and the household, in a structure of positions no participant controls. This is a genuine departure from every other account surveyed, and a reader might reasonably conclude that a tradition so radical about causes cannot be holding the commitment this section attributes to it.

The reply is that a cause and a bearer are different things, and that an account may relocate the first while leaving the second untouched. Cultural capital originates in a structure and arrives in a child, who thereafter has more or less of it. Habitus is laid down by conditions and is carried by the person in whom it was laid down. A code is spoken in a household and is acquired by a child who then speaks it. In each case the explanatory work is done by the structure and the resulting property is predicated of an individual. The tradition's radicalism is real and it operates at the level of causes.

Althusser is the partial exception and deserves the credit. Interpellation is a production of

subjects rather than a transmission to them, and the difference is exactly the one this chapter has been tracking. What his account lacks is any reverse direction, so that an apparatus produces subjects and is not itself produced in the producing. The account is one-directional in the way §1.4 found internalisation to be, and for a structurally similar reason.

1.25.3 The Redescription and Its Availability

Two clarifications are needed before the chapter closes, because the claim is easily overstated in either direction.

The first is that reaching a boundary is not a defect. A theory that explains what happens to a bearer under conditions has explained a great deal, and the phenomena so explained are the majority of what a developmental science is asked about. A parent who wants to know whether a two-year-old's vocabulary is within the expected range, a clinician deciding whether an intervention is indicated, a ministry choosing between two curricula, and a researcher asking whether an effect replicates are all asking questions these accounts answer and this book does not. Nothing in what follows is offered as a replacement for that work.

The second is that the boundary is not a border between what is known and what is unknown. It is a border between what a vocabulary can state and what it cannot. The material on the far side is not mysterious and is not inaccessible to observation. Parents encounter it continually. A parent who reports that a child has become someone the parent did not expect, and that the becoming happened in the exchanges between them and belongs to neither of them, is reporting something ordinary.

Each account surveyed can redescribe such a report in its own terms, and the redescrptions are available: the child's schemes reorganised, a function was internalised, a capacity for shared intention matured, an endowment expressed itself, the system settled into a new attractor, sensitivity produced security, the holding environment permitted a self to consolidate, contingencies accumulated, a network became more efficient, a disposition was transmitted, a nature emerged. Every one of these is coherent. What each does is relocate the phenomenon into a bearer, and the parent's report was about something that happened between.

Proposition 1.26. *Accounts that treat a relation as a condition under which a bearer develops can redescribe any relational phenomenon by relocating it into a bearer. The redescription is always available, and its availability is what makes the underlying commitment difficult to bring into view.*

This last point identifies why the commitment is stable and why it will not be dislodged by counterexamples. There is no observation the accounts cannot accommodate, because accommodation requires only that the observed be attributed to one or another bearer, and every observation involves bearers.

A commitment with this property is not refuted by evidence. Neither, it should be said plainly, is the alternative this book will propose. §1.6 noted that the nativist can always answer a claim of relational generation by saying the capacity was there and the relation revealed it, and that the answer is unfalsifiable. The same holds in the other direction: a relational account can always answer a claim of prior endowment by saying that the endowment was itself constituted in a prior relation. Three positions each capable of accommodating any observation are not distinguished by observation.

What distinguishes them is what they permit to be described, what they make it possible to ask, and what they render invisible. That is an argument of a different kind, conducted by different means, and §1.26.4 states how this book proposes to conduct it.

Constructing the alternative is the business of [Chapter ?? ch:commitments]. What this chapter has established is narrower and is the ground the construction stands on. There is a question about children that the available accounts do not answer, the question concerns how a child comes to be a bearer at all, and the reason it goes unanswered is that each account begins where the question ends.

1.26 The Method of This Book

This chapter has left a debt. It observed that the bearer commitment cannot be refuted by evidence, that the nativist position has the same property, and that the alternative this book proposes has it too. Three accounts each able to accommodate any observation are not separated by observation, and a book that noticed this and proceeded as though it had not would be relying on the reader's forbearance.

The debt is discharged here, and discharging it requires stating what kind of book this is.

1.26.1 The Two Available Methods

§1.2.2 distinguished two traditions of inquiry and named the defect of each. The distinction is taken up again here in the form the rest of the book will use.

The empirical method proceeds by controlled observation. Its power is that it can be wrong in ways its practitioners discover, and this is not a small thing. A field with a mechanism for finding its own errors will, over time, hold fewer of them. Its two defects were named earlier: it cannot cross from what is to what ought to be, and it estranges its object by substituting a narrowed construct for what was originally of interest. The second defect is the one that matters for a book about children, because the substitution is invisible from inside the practice and its accumulation is the subject of [ch. ?? ch:indices].

The traditionalist method proceeds by analysis, by historical reconstruction, and by the disciplined description of what is before us. Its power is that it supplies the categories the other method then measures, and that it can describe what has no operational definition. Its defect is that it cannot establish which of two illuminating accounts is correct, and a tradition whose claims cannot fail has no mechanism for discovering that it has gone wrong.

The temptation is to present these as complementary halves of a complete method, each supplying what the other lacks. The presentation would be false, and the falsity is worth stating exactly. Empirical work cannot cure unfalsifiability, since no accumulation of findings adjudicates a claim about what matters. Traditionalist work cannot defeat the problem of induction, since it has no better access to necessary connection than measurement does. The defects are not complementary. They are simply different, and both remain after the two methods have been combined.

1.26.2 The Dialectic

What the pairing accomplishes is narrower and is worth having.

Each method constrains the other's overreach. Conceptual work left alone drifts toward accounts that explain everything and forbid nothing; the requirement to say what would be observed if it were true is a discipline on that drift, even where the observation is not conducted. Empirical work left alone drifts toward the measurable, and the measurable displaces what was of interest; the requirement to say what the measure is a measure of is a discipline on that drift, even where no philosopher is present to impose it.

Neither discipline closes. A concept forced to state its observational consequences is still not thereby confirmed, and a measure forced to state its object is still a narrowing. What the pairing produces is not certainty but a pair of standing demands, each answerable and neither satisfiable once and for all.

This is why the book has the shape it has. The chapters that follow contain conceptual analysis, historical reconstruction, cultural description, formal modelling, and proposals for measurement, and the mixture is not eclecticism. Each Part is exposed to a demand it cannot meet from its own resources. The ontological chapters are required to state what would be observed; the empirical chapters are required to state what they are measuring and to face the objection that the measuring changes it.

There is a further point, and it is the one that makes this a method belonging to a particular framework rather than a general recommendation of methodological pluralism. The relation between the two methods is itself an instance of what this book describes. Two positions, each with its own logic, neither reducible to the other, each generating something the other cannot: this is the structure the framework calls generative. A method that used only one would have the property the book identifies as degradation, which is the loss of the distinction that made a correction possible. That the argument applies to the book's own procedure is not an ornament. A framework claiming to describe the conditions of generation and exempting its own inquiry from them would have made an exception it cannot justify.

The framework in question is set out in [**Chapter ?? ch:commitments**] and its formal statement is given there. Its governing commitment for present purposes can be stated now, since it bears on how the rest of this book should be read. The framework is historically dialectical. It holds that what can be known and what can be done are both finite within the historical frame in which they occur, that an account produced in one such frame is answerable to conditions it did not choose, and that revision is therefore expected rather than conceded. Nothing in the chapters that follow is offered as a completed statement. The propositions are numbered so that they can be located, disputed, and amended, and a reader who amends one has done what the framework asks rather than what it resists.

Proposition 1.27. *The two methods constrain each other's overreach and do not repair each other's defect. Their pairing yields a standing demand rather than a closure, and the relation between them instantiates the structure this book describes.*

1.26.3 The Discharge of the Debt

The question can now be put in its sharp form. If the bearer commitment accommodates any observation, and this book's alternative accommodates any observation, on what grounds is one preferable?

Three grounds are available and the first two are weaker than they appear.

The first is fertility. A framework may be preferred if it generates questions the alternative does not, and this book will generate a number of them. The ground is real and it is weak, because a framework can be fertile in questions and wrong, and the questions can be interesting and unanswerable. It is offered here as a reason to continue reading rather than as a reason to believe.

The second is the accommodation of recalcitrant cases. A framework may be preferred if the alternative accommodates certain phenomena only by strain. This book will argue that several phenomena are accommodated by the bearer commitment only with difficulty: the parent transformed by the raising, the household that loses a distinction without anyone deciding, the capacity that appears in one relation and is absent in another. The ground is real and it is weak, because strain is a matter of judgement and a determined theorist can absorb a great deal.

The third ground is the one this book rests on and it is of a different kind. A framework may be preferred if it makes describable what the alternative renders invisible, and if what it makes describable turns out to matter.

The claim is not that the bearer commitment is false. It is that a vocabulary in which every developing property belongs to someone has no way to say certain things, that those things happen, and that a household unable to say them is thereby unable to notice them. [ch. ?? ch:two-levels] makes this precise by distinguishing a difficulty that is felt from a difficulty whose vocabulary has been lost, and [ch. ?? ch:disappearance] argues that the second is undetectable by asking. If those chapters are right, then the choice between vocabularies is not a choice between two equally serviceable descriptions of the same facts. One of them removes a distinction the other retains, and the removal is consequential.

This is an argument about what a vocabulary permits rather than about what is the case, and it is answerable in kind. A reader who holds that nothing is lost, that every phenomenon this book claims is invisible can be stated in the received vocabulary without strain, has understood the argument and rejected it. That is the form a refutation would take, and the book is written so as to make it possible.

The chapters that follow develop a number of claims, and a small set of them govern the rest in the sense that the others are worked out under their constraint. One can be stated at this point, since its form is a methodological matter as much as a substantive one.

Keynote Claim I. *Development consists in a child becoming, within relations that can support, revise, and create jointly, someone able to continue generating relations and meanings.*

Four features of the statement require comment, and the fourth is the reason it appears in this section rather than in the ontological chapter.

The claim names three conditions on the relations within which development occurs. They must be able to support, which is to say that what a child ventures within them is held rather than left to fail alone. They must be able to revise, which is to say that an account given of a child within them can be altered by what the child does. And they must be able to create jointly, which is to say that something can arise between the parties that neither brought. Each of these is developed at length later, and each is stated in the negative in [ch. ?? ch:two-levels], where the loss of one of them is what degradation consists in.

The claim specifies a terminus that is not a terminus. What a child becomes able to do is to

continue, and continuation has no completed state. This is what distinguishes the claim from an account of development as the acquisition of a competence, and it is why the assessment proposals of [ch. ?? ch:models] cannot take the form of a threshold passed.

The claim concerns relations and meanings jointly. A child able to generate relations without generating meanings, or the reverse, is not what the claim describes, and [ch. ?? ch:coupling] argues that the two are not separable in the way the phrasing might suggest.

The fourth feature is the methodological one. The claim defines development by what a child becomes able to continue doing, and not by what a child comes to have. The bearer commitment identified in §1.25 is refused here in its positive form rather than merely criticised, and the refusal has consequences for every instrument this book proposes. An instrument built on this claim cannot measure a stock. It must measure whether generation continues, which is a property of a relation over time rather than of a person at a moment. That constraint is what [ch. ?? ch:models] inherits, and much of the difficulty of those chapters follows from it.

The claim did not arise from one tradition. Its ancestry includes the contemporary Marxist work examined in §1.16, particularly the social-reproduction line and its limit; the philosophical accounts of relational being; the literature on generative justice; the dynamical treatment of stability and transition surveyed in §1.7; and the psychoanalytic material of §1.10, in Winnicott's formulation above all. What the claim attempts is a statement compatible with what each of these established and reducible to none of them.

One qualification is required and it matters. This is one keynote claim among several. The book does not proceed from a single organising proposition, and a reader who treats this one as the thesis will misread what follows, since several later chapters develop claims that stand beside it rather than beneath it. [ch. ?? ch:commitments] states the others, and [ch. ?? ch:open-questions] records which of them the book regards as most exposed.

1.26.4 The Materialist Commitment in Its Methodological Form

One further element of method requires statement here, since it governs the four chapters that follow this one and recurs throughout the book.

The preface stated that a practice of rearing is a response to conditions. In methodological form this becomes a constraint on the order of investigation: the conditions are reconstructed before the practice is assessed, and where the reconstruction cannot be completed the assessment is withheld.

Three consequences follow for the chapters ahead.

Theories are examined for the conditions of their formation and not only for their content. [ch. ?? ch:historical] asks what each account surveyed above could see from where it stood, and the asking is not a debunking. An account formed in a particular arrangement is an account of something, and knowing the arrangement is part of knowing what it is an account of.

Practices are described together with what they respond to. [ch. ?? ch:variety] surveys contemporary arrangements across a number of societies, and the survey withholds the evaluative vocabulary that such surveys ordinarily employ. This is a restriction the book accepts and it costs something: a reader who wants to know which arrangement is better will not be told.

The book applies the constraint to itself. Its own position was formed under conditions it cannot fully reconstruct, and its blindness to its own moment's slow variable is the specific case of a proposition it will argue in general at [[ch. ?? ch:blindness](#)]. Nothing in the method allows the author an observation point the argument denies to everyone else, and passages in this book that appear to claim one should be read as errors rather than as exceptions.

1.27 The Case for the Framework

A survey of this length invites a question it has not yet answered. The traditions examined above are serious, several are more developed than anything this book proposes, and a reader who has followed the survey is owed an account of why a further framework is required at all. The account given here is not a list of the framework's merits. It is a statement of eight tensions that the surveyed literature runs into and cannot resolve from its own resources, followed in each case by what this book proposes to do about them. A reader who judges that the tensions are not real, or that the existing traditions handle them adequately, has grounds for setting this book aside, and those grounds are stated below as clearly as the responses are.

1.27.1 The Tension of Historical Standing

Every account surveyed presents itself as a description of children. None presents itself as a participant in the history it describes.

The difficulty is not that the accounts are historically situated, which is unremarkable, but that their form gives them no way to say so. A stage sequence, a classification of attachment, a set of parenting styles: each is stated as a finding about how children are, and a finding about how children are does not have a date. Yet [[ch. ?? ch:historical](#)] will show that each arose under conditions that made certain questions askable and others invisible, and [[ch. ?? ch:circulation](#)] that each changed in transit between societies while retaining its claim to describe children as such.

This book's response is to hold that a theory of development is itself a historical formation, that it is answerable to conditions it did not choose, and that revision is expected rather than conceded. The commitment was stated in [§1.26.2](#) and it applies to the present volume without exception. What follows from it practically is that the propositions here are numbered so that they can be located and amended, that the framework is presented as open rather than complete, and that the conditions under which each claim was formed are stated where they are known.

The cost of this position should be stated too. A framework that expects its own revision is harder to refute than one that does not, and [§1.25.3](#) has already conceded that this book's position is not refutable by counterexample. Historical openness is a virtue that shades into unfalsifiability, and the two are difficult to separate.

1.27.2 The Tension Between Warrant and Inheritance

[§1.21](#) and [§1.22](#) described two bodies of practice that reject each other. One holds that a recommendation is worth having when a controlled study supports it. The other holds that practices

refined across generations carry knowledge that no trial has captured. Each describes the other as its own deficiency.

The rejection is mutual and neither party can win it on the other's terms. A tradition cannot be validated by trial without being first reduced to what a trial can measure, and the reduction discards what its practitioners take to be essential. A trial cannot be answered by appeal to inherited practice, since the appeal supplies no mechanism by which the practice could be found mistaken.

This book holds that both are sources of knowledge and that both require the same treatment: interpretation, revision, and testing in practice. The position is not a compromise between them, and it is worth being precise about why. A compromise would take some recommendations from one source and some from the other. What is proposed instead is that a claim from either source enters the same process, in which it is stated in a form that could be wrong, examined against what is known, and revised by what happens when it is acted on. §1.26.1 set out why this constrains overreach without curing either defect.

1.27.3 The Tension of the Hume Problem and Its Companion

The empirical programme carries two difficulties that are usually treated as one and are better separated.

The first is the familiar one. No accumulation of findings about what is the case entails a conclusion about what ought to be done, and a literature that reports which practices predict which outcomes has not thereby established that those outcomes should be sought. The gap is not closed by adding further findings. Every recommendation issued on empirical grounds has passed through a premise about what is worth wanting, and that premise was not measured.

The second difficulty is less often stated and this book takes it to be the sharper of the two. A methodology that proceeds by measurement must render its object measurable, and rendering a person measurable is an operation performed on the person. A child becomes a profile of scores; a parent becomes a style with a level of responsiveness; a relation becomes a set of coded events. Each of these is a real gain in tractability and each is a loss of the thing that prompted the inquiry. The estrangement is not a side effect that better instruments would remove, since it is what instruments do.

§1.20 put this argument in its strongest form and this book does not claim to have answered it. What is claimed is narrower. A framework that states in advance what it takes a person to be, and that requires its instruments to answer to that statement rather than the reverse, is in a position to notice the estrangement when it occurs. A framework with no such statement measures what is measurable and calls the residue noise. Noticing is not preventing, and [ch. ?? ch:instrument-critique] is where the difference between them is examined.

1.27.4 The Tension Between Ontology and Practice

Two failure modes recur across the literature surveyed and they are mirror images.

An account may be rich in practice and silent about why the practice works. Much of the intervention literature is in this condition, and its silence becomes consequential at the boundary of the tested range: a practitioner facing a case the manual does not cover has nothing

to reason from. An account may equally be rich in ontology and unable to say what anyone should do on a particular evening. Several of the philosophical traditions are in this condition, and the practical vacancy is not remedied by further conceptual refinement.

The response proposed here is a circuit rather than a bridge. An ontology states what is taken to exist; an epistemology states how it could be known; a practice acts on what is known; and what happens in practice, over historical time, returns as pressure on the ontology. Each stage is answerable to the next and the last is answerable to the first. [[ch. ?? ch:models](#)] and the practice Parts are the second and third stages, and [[ch. ?? ch:open-questions](#)] records what the fourth has so far returned.

Whether this book completes the circuit is a fair question and the honest answer is that it does not. The historical feedback stage requires a duration no single volume has.

1.27.5 The Tension Between Classification and Change

A striking number of the accounts surveyed answer the question of development by supplying a set of categories. Piaget supplies stages, Erikson supplies stages, Kohlberg supplies stages, attachment research supplies types, the style literature supplies four cells, temperament research supplies profiles.

A classification tells us which category an instance belongs to. The question of how an instance comes to belong to a different one is a separate question, and a classification does not answer it by being refined. The transition between two stages is not itself a stage. What the literature has instead is a set of proposed mechanisms for movement, and §1.7 noted that the dynamic tradition treats the absence of such mechanisms in stage accounts as its founding complaint.

This book's object is the mechanism rather than the category. Its question is under what conditions a child comes to be able to do what the child previously could not, and it takes the answer to concern the conditions of the relation rather than the child's position in a taxonomy. [[ch. ?? ch:stability](#)] states the criterion this replaces classification with, and it is a criterion about whether generation continues rather than about which type obtains.

The debt to the dynamic tradition here is substantial and was recorded in §1.24.3. What this book adds is a claim about what the state space is a space of, and that claim is where it can be wrong.

1.27.6 The Tension of the Located Property

§1.25 established the finding this subsection turns into a reason. Every account surveyed locates what develops in a child and treats the relation as a condition. The practical form of the commitment is a question: how does one raise a capable child?

The alternative question is what relations are being generated, and the difference is not rhetorical. A parent asking the first question and a parent asking the second will attend to different things, will read the same evening differently, and will notice different failures. The first question makes the child's properties the object of attention and the relation the means. The second makes the relation the object.

This book holds that the second question is prior, and the holding is what most distinguishes it from the traditions surveyed. [[ch. ?? ch:commitments](#)] states the ontology this

requires and [[ch. ?? ch:absorption](#)] states the first substantive proposition that follows from it.

1.27.7 The Tension of Transmitted Knowledge

The dominant picture of what happens when a child learns is a picture of transfer. Something possessed by an adult, or contained in a curriculum, comes to be possessed by the child. §1.4 found this in internalisation, §1.15 in cultural capital, §1.12 in the acquired representation.

The picture has a consequence that is rarely noticed: it makes the adult's development unintelligible. If knowledge moves from a party that has it to a party that lacks it, then the transaction leaves the first party unchanged, and every parent's experience of being altered by raising a child becomes an epiphenomenon.

The alternative developed here holds that what occurs between a parent and a child produces something in the relation that neither held beforehand, that both parties are altered, and that a family's shared understanding is a third thing rather than the intersection of two private ones. §1.16.9 located this claim against the reproduction traditions, and [[ch. ?? ch:knowledge-generation](#)] develops it as an epistemology.

1.27.8 The Tension of Imposed Norms

A book about rearing must say something about what ought to be done, and the literature offers two ways of doing so. A tradition may specify an ideal and derive conduct from it, as §1.22 described. An empirical programme may identify practices associated with valued outcomes, as §1.21 described, with the difficulty noted in §1.27.3.

Both supply norms from outside the relation the norms govern. The first supplies them from a picture of the completed person; the second from a distribution of measured results.

This book takes normativity to emerge within relations rather than to be imposed upon them, and this is one of the five terms the framework holds to co-emerge. A household arrives at what may be asked of whom, what counts as a reason, and what constitutes a wrong, through a history of exchanges in which those things were settled and could have been settled otherwise.

The obvious objection is that this is relativism, and it should be met directly rather than deflected. It is not, for the following reason: that a norm emerged historically does not entail that any norm would have done. The conditions under which a household's normative order remains open to revision are themselves specifiable, and [[ch. ?? ch:authority](#)] specifies them. A household in which the norm cannot be questioned by the party it binds is in a describable condition, and describing it does not require an external standard to which its norms should have conformed. What this book denies is that norms are given prior to relations. It does not hold that all normative orders are equivalent.

1.27.9 The Tension of Disciplinary Multiplicity

This book draws on developmental psychology, education, neuroscience, sociology, philosophy, the Marxist traditions, dynamical systems, and psychoanalysis. Each has its own vocabulary, and a work that moved between them without a common language would be a collection

of chapters written in different registers with no argument passing between them.

The framework is offered as that common language, and the offer is a substantive claim rather than a convenience. If subject, meaning, value, creation, and normativity co-emerge through relational processes, then a neural finding, an ethnographic observation, and a philosophical argument can bear on one another because they concern aspects of one process. [ch. ?? ch:neural-part] is the hardest test of this, since a neural measure and a relational claim are separated by more than vocabulary.

The risk is equally real. A vocabulary general enough to accommodate every discipline may be doing no work in any of them, and a framework that can restate any finding has not thereby explained one. [ch. ?? ch:projection] is given to this and states the test the book proposes to submit to.

1.27.10 The Unit of Development

The eight tensions above converge on a single proposition, and it is the second of this book's keynote claims.

Keynote Claim II. *Rearing consists in the generation of relations rather than the production of a child. What a child becomes is one result among several, alongside the relation between the parties, the culture of the household, and the knowledge, values, and practices held in common. Rearing is the history by which a relational system generates itself, and not the process by which one subject forms another.*

The claim identifies the unit of development. Where the surveyed literature takes a child to be what develops and the relation to be the condition, this book takes the relational system to be what develops and the child's development to be one of its products.

The second sentence names five things that undergo development, and the naming is not a list of by-products. Each is set out below, since they recur throughout the book and the practice Parts address them separately.

1. **The relation between the parties.** What may be said within it, what has been settled, what would count as a breach, and how a rupture in it is repaired. [ch. ?? ch:rupture-repair] treats this directly.
2. **The culture of the household.** What its members can take for granted with one another, including what needs no explanation and what would be strange to state aloud.
3. **The knowledge held in common.** A body of understanding that includes a great deal neither party could state alone, and which [ch. ?? ch:knowledge-generation] treats as generated between rather than transmitted from one to the other.
4. **The values held in common.** The terms in which the household's members can make a case to one another, and by which a claim is recognised as a claim rather than a demand.
5. **The practices held in common.** What the household does without deciding to, including the arrangements that persist because no one has had occasion to question them.

Each of these has a trajectory over years, each may develop or fail to, and none is a property of any member. A household in which the child has advanced on every measured index while

the relation, the culture, and the common knowledge have each contracted is a household in which development has occurred on one of five counts, and the book's later chapters give that condition a name.

The third sentence is the one that carries the ontological weight. The picture it displaces is a picture of formation: one subject, already constituted, acting upon another who is not yet. Nearly every account surveyed in this chapter is a version of that picture, and the versions differ in what the forming party is taken to supply. What replaces it is a system that produces itself over time, in which the parties are internal to what is being produced and neither stands outside it. A parent who forms a child is outside the process. A parent within a relational system that is generating itself is not.

Three consequences follow and they will recur throughout.

The parent develops, and this is a claim about the ordinary case rather than about parents who happen to be reflective. A relation that generates cannot leave one party unaltered, and an account on which the adult is a stable instrument acting on a developing child has described something other than what occurs.

A household has a history that is not reducible to the histories of its members. What has been settled between the parties, what can be said and what cannot, what counts as a reason: these belong to the household and persist across changes in what any member believes. [ch. ?? ch:transmission] treats this history as the object that passes between generations.

An assessment addressed to a child's properties measures a product and omits what produced it. This is the constraint [ch. ?? ch:models] inherits, and the difficulty of that Part follows from it.

The relation of this claim to Keynote Claim I should be stated, since the two are close and are not the same. The first concerns what a child becomes able to do. The second concerns what it is that develops. A reader may accept the first while holding that the child remains the unit, and the second is the stronger commitment.

One further remark concerns what the claim does for the rest of the book, and it bears on a hazard this chapter has been exposed to throughout. A survey of nineteen traditions can accumulate without integrating, and a book that continued in that manner would produce a sequence of chapters each summarising a literature, with the framework named at intervals and doing no work. The claim is what prevents that outcome, if it holds. A Marxist account of reproduction, a sociocultural account of internalisation, an attachment classification, a neural measure of early adversity, and a proposal about instruction conducted with machine assistance all concern the same object under this description: a relational system generating itself over time. They can therefore bear on one another, and [ch. ?? ch:neural-part] and the practice Parts are where that bearing is required to become specific rather than asserted. Whether the claim holds is the question; that a great deal depends on it is not in doubt.

1.27.11 The Limitations of the Framework

A section arguing for a framework is obliged to state where it is weak, and four admissions are made here rather than left for a reviewer to supply.

The framework is under development and several of its formal components are immature. [ch. ?? ch:models] proposes observables and models that have not been implemented at scale,

and a reader who works in a modelling tradition will find the apparatus preliminary by the standards of that tradition. This is a statement about the present condition of the work rather than about what is achievable in principle, and the distinction is one the book cannot make on its own behalf.

Many propositions here lack longitudinal empirical support. The claims that matter most concern what happens to a relation over years, and the studies that would bear on them have not been conducted. What this book offers instead is a specification of what such studies would have to measure, which is a contribution of a different and lesser kind. Whether the propositions survive contact with that evidence is not settled by anything in this volume.

The vocabulary of generation is abstract and abstraction is a hazard here more than in most subjects, since a framework about rearing that cannot be acted on has failed at its own task. The book's response is structural: the practice Parts are not an appendix to the theory but the site where the theory is required to become specific, and a chapter of theory that generates no practical difference is a chapter this book regards as unfinished. Whether that discipline has been maintained is for a reader to judge.

The framework does not replace any discipline it draws on. It supplies no developmental neuroscience, no paediatrics, no clinical psychology, and a reader who requires an answer within one of those fields should seek it there. What is offered is an account of how their findings bear on one another, and an account of that kind can be useful while being useless for every question the individual disciplines answer well.

1.27.12 The Grounds Restated

§1.26.3 identified three grounds on which a framework may be preferred and rested this book's case on the third: that a framework may be preferred if it makes describable what the alternative renders invisible, and if what it makes describable turns out to matter.

The eight tensions specify what that ground amounts to concretely. What the surveyed literature renders difficult to describe is a theory's own historical standing, the relation between warranted and inherited knowledge, the estrangement its instruments produce, the passage between ontology and practice, the mechanism of transition as against the classification of states, the relation as the object of attention, the alteration of both parties in an exchange, the emergence of a normative order, and the bearing of one discipline's findings on another's.

Whether these matter is the question a reader should hold open. This book argues that they do and the argument is conducted by showing what becomes sayable, not by demonstrating that the alternative is false.

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