



## Application for a Grant

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### Identification

This page will be made available to selection committee members and external assessors.

Funding opportunity <b>Insight Grants</b>		Funding Stream <b>A (\$7,000 to \$100,000)</b>				
Joint or special initiative						
Application title <b>Modal perspective in metaphysics</b>						
Applicant family name <b>Hellie</b>			Applicant given name <b>Benjamin</b>			Initials
Org. code <b>1350911</b>	Full name of applicant's organization and department <b>University of Toronto Philosophy (Scarborough Campus)</b>					
Org. code <b>1350911</b>	Full name of administrative organization and department <b>University of Toronto Philosophy (Scarborough Campus)</b>					
					Preferred Adjudication Committee <b>435-01</b>	
Does your proposal require a multi/interdisciplinary evaluation?						Yes <input type="radio"/> No <input checked="" type="radio"/>
Is this a research-creation project?						Yes <input type="radio"/> No <input checked="" type="radio"/>
Does your proposal involve Indigenous Research as defined by SSHRC?						Yes <input type="radio"/> No <input checked="" type="radio"/>
Does your proposal involve human beings as research subjects? If "Yes", consult the <i>Tri-Council Policy Statement: Ethical Conduct for Research Involving Humans</i> and submit your proposal to your organization's Research Ethics Board.						Yes <input type="radio"/> No <input checked="" type="radio"/>
Will any phase of the proposed research take place outdoors?						Yes <input type="radio"/> No <input checked="" type="radio"/>
A. Will any phase of the proposed research take place on federal lands in Canada, other than lands under the administration and control of the Commissioner of Yukon, the Northwest Territories or Nunavut, as interpreted in section 2 of the Impact Assessment Act (IAA)?						Yes <input type="radio"/> No <input checked="" type="radio"/>
B. Will any phase of the proposed research take place in a country other than Canada?						Yes <input type="radio"/> No <input checked="" type="radio"/>
C. Will the grant permit a designated project (listed in the Physical Activities Regulations) to be carried out in whole or in part?						Yes <input type="radio"/> No <input checked="" type="radio"/>
D. Will any phase of the proposed research activities depend on a designated project (listed in the Physical Activities Regulations) being led and carried out by an organization other than SSHRC?						Yes <input type="radio"/> No <input checked="" type="radio"/>
	Year 1	Year 2	Year 3	Year 4	Year 5	Total
Total funds requested from SSHRC	<b>24,250</b>	<b>22,750</b>	<b>28,250</b>	<b>22,750</b>	<b>0</b>	<b>98,000</b>



Family name, Given name

Hellie, Benjamin

## Participants

List names of your team members (co-applicants and collaborators) who will take part in the intellectual direction of the research. Do not include assistants, students or consultants.

Role

Co-applicant ☐

Collaborator ☐

Family name

Given name

Initials

Org. code

Full organization name

Department/Division name

Role

Co-applicant ☐

Collaborator ☐

Family name

Given name

Initials

Org. code

Full organization name

Department/Division name

Role

Co-applicant ☐

Collaborator ☐

Family name

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Full organization name

Department/Division name

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Collaborator ☐

Family name

Given name

Initials

Org. code

Full organization name

Department/Division name

Role

Co-applicant ☐

Collaborator ☐

Family name

Given name

Initials

Org. code

Full organization name

Department/Division name



## Research Activity

The information provided in this section refers to your research proposal.

### Keywords

List keywords that best describe your proposed research or research activity. Separate keywords with a semicolon.

metaphysics; modality; actuality; laws of nature; essence; Chisholm's Paradox; necessity; metaphysical relativism; existence; ontology; counterpart theory; context; perspective; conditionals

### Disciplines

- Indicate and rank up to 3 disciplines that best correspond to your activity.

Rank	Code	Discipline	If "Other", specify
1	55018	Metaphysics	
2	55002	Analytical Philosophy, Linguistic Philosophy	
3	55012	Logic	

### Areas of Research

Indicate and rank up to 3 areas of research related to your proposal.

Rank	Code	Area
1	000	Not Subject to Research Classification
2		
3		

### Temporal Periods

If applicable, indicate up to 2 historical periods covered by your proposal.

From	To
<div>Year</div> <div>1940</div> <div>BC</div> <div>AD</div> <div><input type="radio"/></div> <div><input checked="" type="radio"/></div> <div><input type="radio"/></div> <div><input type="radio"/></div>	<div>Year</div> <div>2020</div> <div>BC</div> <div>AD</div> <div><input type="radio"/></div> <div><input checked="" type="radio"/></div> <div><input type="radio"/></div> <div><input type="radio"/></div>

Personal information will be stored in the Personal Information Bank for the appropriate program.

Application WEB



Family name, Given name

Hellie, Benjamin

## Research Activity (cont'd)

### Geographical Regions

If applicable, indicate and rank up to 3 geographical regions covered by or related to your proposal. Duplicate entries are not permitted.

Rank	Code	Region
1	0000	Not subject to geographical classification
2		
3		

### Countries

If applicable, indicate and rank up to 5 countries covered by or related to your proposal. Duplicate entries are not permitted.

Rank	Code	Country	Prov./ State
1			
2			
3			
4			
5			



Family name, Given name

Hellie, Benjamin

### Response to Previous Critiques - maximum one page

Applicants may, if they wish, address criticisms and suggestions offered by adjudication committees and external assessors who have reviewed previous applications.



Family name, Given name

Hellie, Benjamin

## Summary of Proposal

The summary of your research proposal should indicate clearly the problem or issue to be addressed, the potential contribution of the research both in terms of the advancement of knowledge and of the wider social benefit, etc.

'Modal' phenomena pertain to must and can: to what is necessary or possible. On a canonical analysis, modality is explicated in terms of 'possible worlds': necessities hold (are true) in all of them, possibilities in some; while 'mere' possibility is distinguished from factuality by identifying a unique 'actual world', such that what is true in it is exactly what is true 'full stop' (we 'occupy' it), with any other possible world verifying at least some falsehood. On this analysis, reasoning about modality involves 'consideration' of possible worlds; but a contrast in perspective in such reasoning has been widely recognized since the late 1970s, between considering a world 'as counterfactual' (thinking about it 'from the outside') and 'as actual' ('from the inside': pretending we occupy it).

Metaphysics has long invoked possible-worlds analysis; but (in striking contrast with epistemology) has made scant use of this contrast in modal perspective, with a pervasive tropism toward the 'as-counterfactual'. The proposed research program hopes to demonstrate that this is unfortunate: appreciation of the 'as-actual' reveals alluring candidate solutions to a diversity of long-standing metaphysical puzzles. Some headway on the program has been made through preliminary collaborative investigations: my objective during the granting period will be to round out and extend this work to a full treatment of the metaphysical significance of modal perspective, in several articles and a co-authored book.

The puzzles addressed exhibit a common tension: for some claim *M* of metaphysics, we are torn between 'stability' (*M* holds, or else fails, in absolutely all possible worlds) and 'dependence' (*M* somehow varies in truth from world to world). With only the as-counterfactual perspective to go by, the tension is genuine: if *M* holds (or else fails) in absolutely all worlds as-counterfactual, *M* has (of course) no scope for variation across worlds as-counterfactual. But invoking the as-actual perspective dissipates any tension: fixing a world considered as actual, *M* holds (or else fails) in absolutely all worlds as-counterfactual (stability); but varying the as-actual world can vary which of 'hold' or 'fail' it is (dependence).

To illustrate: 'Chisholm's Paradox' of material artifact origins poses a long-familiar putative tension in intuitive judgement. A hammer, *H*, is built from an iron head and an oak handle. Intuitively: ('*M*') building *H* from a lead head and an elm handle is absolutely ('metaphysically') impossible; because *M* concerns what is metaphysically impossible, *M* is intuitively invariant from world to world (stability); *H* built from iron+elm or lead+oak is possible; and in an iron+elm- or lead+oak-world, by parity of reason, (not-*M*) lead+elm is possible: so *M* does, after all, vary from world to world (dependence). Solution: the 'parity of reason' is under as-actual variation in the origin of *H*---on which the stable as-counterfactual possibilities for this origin turn out to depend.

Aspects of the program touch several subregions of philosophy. (1) A canvas of the scope of further metaphysical puzzles falling to this strategy, and their detailed analysis: preliminary work suggests a remarkable breadth, covering, among others, puzzles in ontology as well as in metaphysics of science. (2) Matters in philosophy of language including both 'descriptive semantics' (the formal analysis of particular linguistic constructions) and 'metasemantics' (the articulation and interpretation of a framework within which descriptive semantics is best pursued). (3) Historical investigation, explaining the surprising neglect of modal perspective in metaphysics, into both the development of specific subliterations and more general tendencies in the analytic tradition.

## Detailed Description

**Context** The context for my project consists, centrally, of (I) the well-known relational (‘possible-worlds’) semantics for modal propositional logic and its various extensions to modal predicate logic, a technical resource first flourishing from the late 1950s and over the course of the 1960s. The context is filled out by two branches from this central component, each of them first flourishing from the late 1960s over the course of the 1970s: (II) the ‘modal metaphysics’ tradition of reading metaphysical interpretations into the technical resources from (I) and/or invoking these resources to shed light on pre-existing metaphysical questions; and (III) the ‘modal pragmatics’ tradition of extending the resources from (I) to accommodate the broadly pragmatic phenomena of context-sensitivity and speech-act content.

(I) Contemporary research into the logic of modalities commenced in the opening third of the twentieth century, with CI Lewis’s syntactic exploration in [69] of a variety of systems of intensional logic; roughly concurrently, the conception of a possible-worlds semantics was nascent in Wittgenstein’s *Tractatus* [147], with its informal theory of sentence-meanings as truth-conditions on possible states of affairs. The 1940s witnessed Carnap’s gradual accretion [9–11] of certain central elements of a *Tractatus*-inspired possible-worlds semantics for an elementary modal predicate logic (with its propositional fragment the strongest non-trivial modal propositional system, Lewis’s S5, and the modality interpreted as a universal quantifier over worlds); alongside this early semantical work came Barcan Marcus’s [2] extension of the syntactically more sophisticated Lewis program to encompass predicate systems.

Over the 1950s, around a dozen authors separately (varying in format, center of emphasis, level of sophistication, scope of coverage, and degree of explicitness) proposed the device of the ‘accessibility relation’ over possible worlds, to serve the semantical analysis of propositional systems weaker than S5, while a smaller group attempted strategies for integrating Tarski-style domain semantics for first-order quantifiers; these scattered efforts culminated in the integration of the semantical and syntactical strands, with the near-simultaneous announcement by Kripke and Hintikka of completeness proofs for quantified systems, and by Kripke for many sub-S5 propositional systems.<sup>1</sup>

The apparatus of relational semantics for propositional modal languages is robust, and familiar in philosophy: a ‘frame’ pairs a set of ‘possible worlds’ with an ‘accessibility relation’ over them; a set of frames  $\mathbf{F}$  characterizes a propositional modal system  $\mathbf{S}$  as the set of all sentences true under any valuation in any world from any frame in  $\mathbf{F}$ , where, in particular, for a frame with relation  $R$ ,  $\Box\varphi$  is true in world  $w$  just if  $\varphi$  is true in world  $w'$  whenever  $R(w, w')$ . The strength of  $\mathbf{S}$  varies (in a richly-explored manner) with the constraints on  $\mathbf{F}$ : so the set of all equivalence frames (with  $R$  an equivalence relation) characterizes the system S5 (the normal modal system with axioms  $T$ :  $\Box p \supset p$ ; 4:  $\Box p \supset \Box\Box p$ ; and  $B$ :  $p \supset \Box\Diamond p$ ); while the set of all reflexive, transitive frames characterizes the system S4 (with axioms  $T$  and 4); and so forth.<sup>2</sup>

Semantical analysis of modal predicate languages is perforce more complex, its robustness attenuated proportionately, with the most straightforward implementation impeded by immediate philosophical worries. We might enrich relational semantics with an individual domain, while analyzing  $Fa$  as true in  $w$  just if  $F$  is satisfied in  $w$  by the denotation of  $a$  (perhaps, following Carnap, by the  $w$ -value of the ‘individual concept’ assigned to  $a$ ), and  $\forall x Fx$  as true in  $w$  just if  $F$  is satisfied in  $w$  relative to the entire domain: but these analyses validate  $\Box\exists x x = a$  and remove interaction between quantifiers and modals, yielding equivalence between  $\Box\forall x \varphi$  and  $\forall x \Box\varphi$ —the so-called ‘Barcan Equivalence’, familiarly predicting the putatively unattractive necessity of existence and nonexistence. Weaker systems require more intricate characterizing semantical analyses; an assortment have been proposed, each facing generally recognized shortfalls of either technical or conceptual adequacy.<sup>3</sup>

<sup>1</sup>For detailed analysis of this period, see [22]: signal works discussed are [97, 58, 59, 140, 98, 99, 65, 66, 54].

<sup>2</sup>Overviews of these issues abound; a small selection: [17, 23, 4].

<sup>3</sup>For a systematic, opinionated overview of the technical options, see [42–44].

(II) Shortly following (or sometimes concurrently and in concert with) these technical developments, theorists came to notice a variety of applications, particularly in the analysis of the conceptual repertoire of the natural sciences; and also a variety of interpretive challenges, pertaining especially to ontology (among these latter are ‘Chisholm’s Paradox’ from the Summary description, and also the ‘Barcanite’ issue just now briefly sketched). This cluster of applications and challenges has over the interim coalesced into an identifiably, if somewhat diffusely, interconnected literature on ‘modal metaphysics’, with its highly influential touchstone works Kripke’s [67] and DK Lewis’s [81] (notably also: [108, 138, 124, 33, 51]). I sketch three such challenges fitting the STABILITY/DEPENDENCE structure—severally cutting across the logical types addressed in (I), collectively illustrating the broad significance of modal perspective.

(A) An *undermining* puzzle about laws of nature. A STABILITY principle here would exclude inter-world variability in the truth-value of *it is a law of nature that  $\varphi$* . On its behalf, *necessitarians* cite the explanatory power of appeals to law: if we answer the question ‘why, if it goes up, will it come down?’ with ‘it is a law of nature that what goes up comes down’, necessitarianism virtuously avoids the peculiar further question ‘yeah, but what distinguishes this case from one of those cases where it is a law of nature that what goes up comes down, but things can go up without coming down?’.<sup>4</sup> If, as is generally agreed, the logic of metaphysical necessity is S5, this reasoning excludes such variability.

But a powerful case for DEPENDENCE (admitting such variability) comes from the idea that the laws of nature should be sensitive to the ‘categorical’ facts on the ground—on pain of being ‘brute’, inexplicable sources of constraint without reciprocal responsibility to the categorical—an idea incorporated by leading theories of laws: perhaps the laws are the simplest, strongest systematization of the categorical facts (‘Humean’ laws); or perhaps properties carry their causal powers essentially, and are generated by the categorical fact that exactly *these* properties are instantiated (‘Aristotelian’ laws). But this sensitivity predicts *undermining*—actual categorical facts yielding actual laws permitting categorical facts yielding different laws differently permitting categorical facts: perhaps *richly*, permitting actually forbidden possibilities; or perhaps *leanly*, forbidding actualities. Within the literature, DEPENDENCE theorists forego the explanatory power of necessitarianism; though the prospect exists of ‘accessibilism’ (as under (B)) for metaphysical necessity (abandoning *transitivity* for *rich* undermining, or *symmetry* for *lean* undermining).<sup>5</sup>

(B) *Chisholm’s Paradox* of individual essence. Recall the ‘Summary’ example of hammer *H* actually built from iron+oak: the STABILITY principle moves from *H could (metaphysically) not have been built from lead+elm* and its metaphysical necessity, along with the S5 logic of the latter to the unavailability of any possible world verifying *H could have been built from lead+elm*; while the DEPENDENCE principle proceeds from *H could have been built from iron+elm* (or *H could have been built from lead+oak*) together with reasoning by parity between actuality and an iron+elm-world (single-part replacements are possible in both or neither) to the truth at an iron+elm-world of *H could have been built from lead+elm*.

Within the literature, some resolutions of the conflict abandon STABILITY: whereas with (A), the *it is a law of nature* operator may be weakened below S5, the only operator available for such weakening in (B) is *metaphysical necessity*. One such strategy adopts an ‘accessibilist’ structure for metaphysical necessity, declaring a world in which *H* is made from lead+elm to be actually ‘inaccessible’ but ‘accessible’ from an iron+elm-world. But a sub-S5 logic is also attainable via a ‘counterpart’ semantics, according to which the shifts in index-world induced by a modal operator can adjust the individual concept assigned to an embedded term: then we may allow that, contrasting the actual world *a* with an iron+elm-world *w*, indexing to the one rather than the other shifts the individual concept for ‘*H*’ so that, in a lead+elm-world, indexing to *w* yields a lead+elm aggregate but indexing to *a* does not—thereby verifying both *H could not have been built from lead+elm* and *possibly, H could have been built from lead+elm* (the former because

<sup>4</sup>For defense, see [90, 92]; and in the context of the undermining puzzle, [35, p. 247].

<sup>5</sup>Humean: [74, sec. 3.3]; Aristotelian: [123]. Humean undermining: [81, p. 20]; Aristotelian undermining: [12, sec. 3.1], [35, p. 244–5]; ‘undermining’: [80, p. xv] on [78]—compare [35, p. 246n16].



the index for ‘could’ is fixed to  $a$ , and the latter because the embedding modal shifts it to  $w$ ).<sup>6</sup>

Other resolutions abandon DEPENDENCE: ‘mereological essentialism’ rejects *H could have been built from iron+elm* (dually, ‘antiessentialism’ admits *H could have been built from lead+elm*); while a ‘sharp cutoff’ view denies any legitimacy to reasoning by parity from an iron+elm-world: folks there accept *H could have been built from lead+elm*, but are brutally wrong in doing so.<sup>7</sup>

(C) A Barcanite challenge about the necessity of existence and nonexistence. Very briefly: can there be inter-world variability in truth-value of statements of ontology (to the effect, perhaps, that the cardinality of the existents is exactly such-and-such; or that some individual (designated ‘de re’) exists; or that some essential, severally unsatisfiable predicate is satisfied or not)? On behalf of STABILITY is the simplicity of the logic and semantics resulting if it cannot. But on behalf of DEPENDENCE is the thought that, for a certain human  $d$ , whether  $d$  exists depends on whether their parents engaged in appropriate begetting activity: in possibilities where they do not, matter is not ordered in a way sufficient for  $d$  to exist as a human; and if  $d$  is a human,  $d$  is essentially so, and could not possibly exist as ‘contingently nonconcrete’.<sup>8</sup>

(III) The end of the 1960s witnessed breakthroughs in the application of intensional semantics to broadly ‘pragmatic’ phenomena, particularly through the isolation of an important distinction in the broader category of ‘context-sensitivity’, a distinction giving rise to certain logical peculiarities. The fundamental technical resource for accommodating these phenomena, developed in the early 1970s, was a ‘two-dimensional’ (2D) foliation of the earlier intensional semantics. Later in the decade, epistemologically-minded theorists located within the expanded approach the representational import of its ‘horizontal’ and ‘diagonal’ projections; this, in turn, led to the discovery of the ‘as-counterfactual’/‘as-actual’ contrast in modal perspective mentioned in the Summary.

To expand. A long-standing interest of logicians of tense was the ‘indexicality’ of temporary sentences like *the sun is in eclipse* in interaction with temporal operators like *always* or *henceforth*: analogously to the world-semantics for a contingent sentence like *Hamilton was born on Nevis* and the quantificational action of modals, a moment-semantics relativizes truth-value to moments of time (perhaps under a certain ordering), and analyzes *always* as a universal quantifier over moments. The category of ‘indexicality’ was unsettled by Kamp’s 1967 discovery (*avant le lettre*) of the ‘rigidifying’ action of *now*: the apparent logical validity of  $\varphi$  just if *now*,  $\varphi$  is not sustained through embedment under *always*; a generalization to the modal case, swiftly observed by DK Lewis, involves the rigidifying *actually*: the apparent logical validity of  $\varphi$  just if *actually*,  $\varphi$  is not sustained through embedment under *necessarily*.<sup>9</sup>

The early 1970s subsumed proposals of Kamp and Lewis under a general ‘double-indexing’ framework assigning truth-values along two ‘dimensions’ and providing a ‘diagonal’ or ‘real-world’ analysis of logical consequence. For modals, truth is relativized to both an ‘index’- and a ‘context’-world; the data of the embedment puzzle are then explained thus: relative to worlds  $i$  and  $c$ , *necessarily*,  $\varphi$  is true just if for every world  $i'$ ,  $\varphi$  is true relative to  $i'$  and  $c$ , while *actually*,  $\varphi$  is true just if  $\varphi$  is true relative to  $c$  and  $c$ ; and  $\varphi$  is logically valid just if (on all frames and valuations) for every world  $c$ ,  $\varphi$  is true relative to  $c$  and  $c$ .<sup>10</sup>

Later in the decade, various theorists noted an affinity to, and thus a prospect of interpreting, Kripke’s dissociation of metaphysical necessity from apriority:  $\varphi$  just if *actually*,  $\varphi$  is predicted to be logically valid and thus presumably apriori—but with its embedment under *necessarily* not valid, is predicted to be not

<sup>6</sup>Accessibilism: [16, 117, 118]; objections: [81, pp. 246–8], [142, sec. 8.3]. Counterpart theory: [70, 73, 83]; as a semantics: [29, 31], [53, sec. 3.2.2]; objections: [52, 148, 32, 30]; and CP: [37], [81, p. 248]; objections: [142, sec. 8.3].

<sup>7</sup>Essentialism: [18–20, 151, 134]; objections: [109, 141, 64]; antiessentialism: [94]. Sharp cutoff: [142].

<sup>8</sup>‘Barcanists’ siding with STABILITY: [150, 88, 89, 143, 145]. Barcanism and the ‘contingently nonconcrete’: [89], [143, p. 266], [145]. Contingent existence: [42, p. 257], [143, p. 258], and cites in [145, ch. 1]; nonexistence: [66, pp. 65–6], [143, p. 258]. The canonical ‘domain relativization’ semantics for DEPENDENCE: [66, 127]; complaints: [42, 43, 143, 145]; taxonomy of other strategies: [42, p. 250]; ‘individual concepts’: [137, 43]. An approach with some affinity to RMM: [34].

<sup>9</sup>‘Indexicality’: [100, 101, 72]. ‘Rigid’: [67]; rigidification: [60, 61, 112, 71].

<sup>10</sup>Double indexation: [122]; diagonal consequence: [139, 62, 38, 39]; opposition: [24, 26, 48, 49]. ‘Index’/‘context’: [76].

metaphysically necessary; while the above apriority suggests that *actually*,  $\varphi$  has the same epistemic status as  $\varphi$ , so that both are aposteriori if either is—but *actually*,  $\varphi$  is predicted to be noncontingent.<sup>11</sup>

Late in this literature, ‘consideration as actual’ was coined to label reasoning about truth-values along the diagonal; during a mid-1990s resurgence of interest, ‘consideration as counterfactual’ was applied to reasoning about truth-values along the horizontal. This terminology drove an eventual explanatory theory of the Kripkean dissociation: what we care about in valid reasoning is security against error about how things *are* (actually); while metaphysical necessity is manifestly concerned with how things *could be* (counterfactually)—thus, the dissociation stems ultimately from a distinction in *modal perspective*.<sup>12</sup>

**Objectives and methodology** Despite the roughly concurrent appearance and early development of components (II) and (III) of the context, each long unfolded in large part or entirety in isolation from the other. Their mutual relevance, as sketched in the Summary, is that each puzzle in (II) can be resolved by appeal to the distinction in modal perspective from (III): to wit, it is variation in the world considered *as counterfactual* which displays the putative STABILITY, whereas the putative DEPENDENCE appears varying instead the world considered *as actual*—so the appearance of conflict is engendered by an equivocation of modal perspective. This observation was to my knowledge first published in 2012 by Adam Russell Murray and Jessica M. Wilson [105]; what has come to be known as the ‘Relativized Metaphysical Modality’ (RMM) program develops the observation in service of a systematic reassessment of a variety of subregions of metaphysics. I joined the RMM program as the co-supervisor (with Wilson) of Murray’s dissertation [103], and was the primary drafter of the overview [53] (the puzzles in (II) are expanded on there in sec. 3, and technicalities of RMM resolutions sketched in sec. 4).<sup>13</sup>

The objective of the proposed research is to contribute to the rounding out and completion of the RMM program. The considerations involved are broadly distributable into: (IV) metaphysical matters; (V) questions in philosophy of language; and (VI) matters of historical development. My relevant areas of expertise are more weighted toward the technical and historical, so my contributions to the program are primarily in (V) and (VI), with some localized subregions of (IV). In particular, during the granting period, I will individually publish several papers in philosophy of language on matters that are central to the articulability and coherence of the RMM vision. These will fold into a collaboratively authored book on the RMM program, in which I will take primary charge also of (VI) and certain issues under (IV) (counterpart theory as under (II-B); chance–credence as under (IV-A); and counterfactuals as under (IV-B)); I will also design the overarching mathematical regime (and of course weigh in elsewhere).

(IV) An initial aspect of the metaphysical component involves a canvas of the literature for further puzzles fitting the same schematism and potentially resolvable along analogous lines: several examples stand out (preliminarily to a more thorough survey). Closely resembling (A) is Lewis’s ‘Big Bad Bug’ concerning objective chance, with its well-known conflict between the conceptual role of chance (a source of STABILITY) and an attractive metaphysics (a source of DEPENDENCE—indeed, the ‘undermining’ considerations in (A) are directly analogous to phenomena Lewis so labels). Resembling aspects of both (A) and (B) is a recently discovered puzzle for the logic of counterfactual conditionals involving Chisholm’s Paradox-style ‘limited tolerance’ reasoning. A direct application of (C) is a well-known tension (arguably tracing to the *Tractatus* case for the necessity of objects, and thus their simplicity, and thus a logically perfect language) between the conception of propositions as a set of worlds (motivating STABILITY for claims about the existence of propositions) and the thought that some propositions are *de re* (motivating DEPENDENCE).<sup>14</sup>

<sup>11</sup>2D and Kripke: [75, pp. 172–3], [62, 126, 28, 26].

<sup>12</sup>‘As actual’: [26]; ‘as counterfactual’: [13, 57]; resurgence: [56, 85, 5, 129, 14, 15, 45].

<sup>13</sup>For reactions to RMM, see [135, 41, 116, 27].

<sup>14</sup>(A): [77, 80, 84] and, inter alia, [47, 136, 1, 91, 6, 107, 7]. (B): [3]. (C) [147, 2.02–2.0212]; inter alia, [111, 131], and citations in [40]: Murray describes the RMM treatment in [104].

A further aspect involves the development of an underlying, explanatory picture: how can it be that what is metaphysically necessary makes, in some way, an ineliminable appeal to how things actually are? In the present context, the 2D apparatus is naturally read as parceling out the component inputs to our reasoning about metaphysical necessity into *specific facts* and *general principles*—the former component associated with the categorical truths about the ‘contextual’ world (the ‘as-actual’ coordinate), and the latter with a system of categorical-to-modal conditionals (those evaluated as true in every ‘diagonal’ coordinate pair). The overall image is of a sort of ‘bounded naturalism’ in metaphysics, in which the limits of possibility for the world (so to speak) project from the (arbitrary, brute) condition of nature, along (absolutely fixed, principled) vectors of logic. This image finds a middle ground between a pure naturalism, on which questions of metaphysics (when sensible) are handed over to natural science; and the more ‘apol-lonian’ approach of the traditional modal metaphysics, in which actuality is constrained by, but has no reciprocal input into, the limits of possibility.<sup>15</sup>

(V) Making sense of this bounded naturalism requires delicate follow-on investigations in philosophy of language, in order to thread between a dilemma of complaints that (D) the true notion of ‘metaphysical’ necessity would better apply to our truth in all worlds as-counterfactual, at all worlds as-actual; and that (E) the categorical-to-modal conditionals required to state ‘general principles’ are inexpressible.

(D) The complaint is developed efficiently using the *undermining* puzzle from (II-A). On the view in [53, sec. 4], the actual world,  $a$ , induces laws of nature verified at just the worlds in a set  $L(a)$ ; among these is an ‘undermining’ world  $u$  inducing different laws of nature, verified at just the worlds in a distinct set  $L(u)$ : suppose that this  $L(u)$  contains a world  $w$  not in  $L(a)$ , and thus verifying some sentence  $\varphi$  false at every world in  $L(a)$ : according to the nomological necessitarian, this  $\varphi$  is metaphysically impossible. But why say this? The world  $w$  is right there, verifying  $\varphi$ , after all. Although the consideration of the actual world  $a$  as actual renders  $w$  unavailable for consideration as counterfactual,  $w$  becomes available for consideration as counterfactual upon consideration of the undermining world  $u$  as actual. On the traditional understanding of metaphysical possibility as the ‘broadest’ variety of possibility, attained by lifting absolutely all restrictions on quantification over worlds, it would seem that  $w$  is metaphysically possible: after all, we are speaking about it, apparently requiring our capacity to quantify over it—jumps among directions of modal perspective notwithstanding.

In response, I appeal to Kaplan’s famous prohibition on ‘monsters begat by elegance’: intensional sentential operators can shift only *indexical* coordinates (such as an as-counterfactual world); shifts in *contextual* coordinates (such as an as-actual world), are beyond natural language.<sup>16</sup> But the objection appeals to ‘monstrous’ metaphysical modal operators: the troublesome world  $w$  is beyond the set  $L(a)$  and so no modal operator can quantify over  $w$  with the contextual world fixed to  $a$ ; and it would require a monstrous shift of the contextual world to  $u$  in order to bring  $w$  within the domain of modal quantification.

Why bar monsters? An empirical motivation sees the Kamp/Lewis discrimination of ‘indexical’ from ‘contextual’ dependence as reflecting a real contrast in semantical argument structure: the former a kind of unsaturatedness amenable to control by compositional, language-internal mechanisms, with the latter reserving control to language-external, contextual factors. For a logical motivation, allowing *all* monsters admits a ‘diagonal necessity’ operator  $\Box$  with  $\Box\varphi$  an invariable truth (and thus a tautology) if  $\varphi$  is true down the diagonal and otherwise an invariable falsehood (and thus a contradiction). Next, Williamson observes that the fundamental conception of rigidification (the core phenomenon motivating 2D) motivates the construction of a ‘universal rigidifier’  $A$  such that, for any environment  $E$  and sentence  $\varphi$ ,  $EA\varphi$  is equivalent to  $(\varphi \supset E\top) \wedge (\neg\varphi \supset E\perp)$  ( $\top/\perp$  some ‘invariable’ truth/falsehood). On the diagonal analysis of entailment,

<sup>15</sup>This polarity is typically manifest as an ‘ethos’ underlying detailed work, with certain works more representative of an ‘ideal type’: [50, 145] (apollonean); [68, 110] (naturalist). Bounded naturalist sympathies appear in, e.g., the case from quantum entanglement to priority monism in [120].

<sup>16</sup>[62, sec. VIII]; also [76, 55, 121, 119, 114, 132].

$\Box A\varphi$  is then true at a diagonal point just if  $(\varphi \supset \Box \top) \wedge (\neg\varphi \supset \Box \perp)$ —equivalently:  $(\neg\varphi \supset \Box \perp)$ ;  $(\neg\varphi \supset \perp)$ ;  $\varphi$ —is. But whatever the semantic behavior of  $A$ ,  $\Box A\varphi$  is by stipulation either a triviality or a contradiction—so  $\varphi$  is equivalent either to (and is itself thus) a tautology or a contradiction. Short of *ad hoc* restrictions of motivation or expressive power, we must bar monsters to secure language against collapse into triviality.<sup>17</sup>

(E) Over to the other horn: barring monsters would seem to bar the categorical-to-modal conditionals articulating ‘general principles’, rendering bounded naturalism inexpressible. After all, we grasp these principles by shifting the world considered as actual; so a conditional apt to state such reasoning would be along such lines as ‘if things are actually such that  $\varphi$ , it is metaphysically necessary that  $\psi$ ’. But in order to have the intended result, the *if*-clause must somehow shift the world of the *context* against which the consequent is evaluated; and, having barred monsters, it cannot do so through the ordinary semantic activity of an intensional operator—so unless (indicative) *if*-clauses are somehow semantically extraordinary, the intended result is unobtainable, and bounded naturalism is inexpressible.

In response: *if*-clauses are semantically extraordinary. An ordinary intensional operator—a modal or temporal operator, or the *if*-clause as analyzed by Stalnaker/Lewis—adjusts a coordinate against which its operand is evaluated during semantic composition. In contrast, the shift of context associated with an *if*-clause does not occur during semantic composition, but is instead a ‘postsemantic’ effect, occurring only once a fully composed semantic value must project a certain propositional content against a specified context  $c$ . Picturesquely, *if*  $\varphi$  ‘punches a hole’ in the semantic value of its operand, ‘shaped’ like those contexts verifying  $\varphi$ ; a content appropriate to  $c$  can only be assigned to the sentence by ‘filling the hole’: to wit interpreting the operand in a context (selected by  $c$ ) verifying  $\varphi$ .<sup>18</sup>

Rather than *ad hoc*, this postsemantic analysis is independently motivated. First, incorporating Kamp’s tensed, rigidifying language within a propositional pragmatic theory requires a postsemantic operation on semantic values to convert (bindable) *indexical* temporal arguments to (saturable) *contextual* arguments (the lesson of Lewis’s discrimination of Kaplanian characters from compositional semantic values). Second, Williamson’s invocation of the ‘universal rigidifier’  $A$  is to collapse the indicative *if* to the material conditional: interrupting the argument apparently requires excluding the operand of an *if*-clause from those ‘environments’  $E$  available for rigidification; the extraordinary ‘hole-punching’ behavior posited motivates this exclusion. Third, a postsemantic approach assembling these threads improves, along both conceptual and technical lines, the most adequate standing proposal (McGee’s 2D ‘sentence storage’ theory) for interrupting a further, widely discussed ‘multiple antecedent’ collapse due to Gibbard.<sup>19</sup>

(VI) If the distinction in modal perspective has been widely discussed in epistemology but scarcely noticed in metaphysics, why? (F) Technical barriers include: (1) the logical tools exploited by opponents of STABILITY are all older than double indexation (though, contrastingly, a fully *semantic* counterpart theory is relatively recent development); (2) the various puzzles are themselves old; (3) pivotal figures Lewis and Kripke are, respectively, by admission compartmentalized in thinking about double indexation and largely silent about it; (4) the diagonal conception of consequence coalesced later than double-indexation, and certain metatheoretic oddities render it yet controversial; (5) monster-barring remains controversial, with its motivation not generally appreciated; (6) standing theories of the conditional are not adequate to bounded naturalism. (G) Conceptual barriers (more speculatively) include: conceptions of metaphysics as ‘apollonian’, untainted by brute circumstance; or as ‘absolute’, requiring ‘objectivity’ and excluding perspectival input; or as hand in hand with logic, the latter envisaged as in tension with perspective-sensitivity.<sup>20</sup>

<sup>17</sup>Empirical: [76, pp. 31–2].  $A$ : [144]. Collapse: compare the [21] ‘slingshot’ against [9]; and more generally [106].

<sup>18</sup>‘Ordinary’: [76, pp. 27–31]. ‘Stalnaker/Lewis’: [125, 74]. ‘Postsemantic’: [93]. ‘Selection’: [125, 8].

<sup>19</sup>For postsemantics: [76, pp. 39–42]; and [113, 115, 149]. Williamson collapse: [144, 146]; opposition: [132]. Gibbard collapse: [46, 36, 63]; storage: [96, 95].

<sup>20</sup>This sketch is lightly expanded upon in [53, sec. 5].

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**Knowledge mobilization plan** The primary vector for knowledge generated by the proposed research will be several articles and (my contribution to) a monograph. The monograph (working title *Modal Metaphysics Relativized*), a comprehensive examination of the ‘Relativized Metaphysical Modality’ (RMM) program, will be co-authored with Canadian philosophy professors Adam Russell Murray (Manitoba) and Jessica M. Wilson (Toronto) (collectively: ‘HMW’). HMW (in various groupings) have produced three articles and a dissertation on RMM, already garnering at least five current or forthcoming citations. Informally encouraged by Peter Momtchiloff of Oxford UP to prepare a book proposal on RMM, HMW have worked up a tentative outline and distribution of tasks for the proposal and monograph.

Feeding into the RMM program and HMW’s monograph, I will publish a number of single-authored journal articles on issues in philosophy of language and history of analytic philosophy. In philosophy of language (of interest independently of RMM, and discussing ideas antedating my involvement): (1) ‘Rigidification and monstrosity’ develops the argument sketched in (V-D) of the Detailed Description, for submission to *Analysis*; (2) ‘A postsemantic solution to two triviality problems for conditionals’ develops (V-E): this unavoidably long paper is appropriate to *The Philosophical Review* (and may require splitting in two); (3) ‘Why and whither postsemantics?’ lays the foundation for (V-E): each of *Philosophical Studies* and *Philosophy and Phenomenological Research* has published work cited here. In history of philosophy (VI-G), (4) ‘The ‘apollonian’ strand in analytic metaphysics’ discusses ‘perspective-freedom’ in Lewis and Kripke, mixing history and metaphysics characteristically for *Mind*.

I post pre-prints of all papers on my University of Toronto website ([benj.ca](http://benj.ca)); I aim to publish in open-access venues whenever possible, and will follow the Tri-Agency Open Access Policy. I will present draft material at professional conferences, workshops, seminars, and invited talks: components of the project already workshopped include (3), used in most of my talks this decade; and (2), in a 2018 talk.

This May, I submitted to OUP-USA a contracted book MS, titled *Out of This World: Logical Mentalism and the Philosophy of Mind* (I expect reports by December), of about a decade in the writing. Alongside this major primary endeavour, I have published over one article per year while a faculty member, in top venues: specialist and generalist journals (*Philosophical Review*, *Philosophical Studies*, *Analysis*, *Mind*, *Philosophers’ Imprint*, *European Journal of Philosophy*, *Inquiry*); invited annuals (*Philosophical Perspectives*, *Philosophical Issues*); high-profile collections (Oxford UP, Blackwell, MIT Press); and longer reference works in major handbooks (Routledge, Cambridge UP). I have given (or have been invited to give) talks at philosophy departments in 21 countries (among ‘top ten’ departments: NYU, Oxford, Rutgers, Harvard, Pittsburgh, Michigan, Berkeley, Toronto); and many conferences, workshops and seminars. I expect that during the granting period, I will sustain this rate of output and quality of venue.

My work brings technical tools from logic and mathematics to general philosophical problems. An important part of my work, then, consists in distilling and presenting technical results for readers who are not specialists in the respective technical sub-fields. For this purpose and others, presenting and discussing my work with philosophers from many different sub-fields, and with researchers in cognate areas such as linguistics and mathematics, has been essential to developing my ideas and shaping how those ideas are framed. The travel funding included in the budget for this project will enable me to submit my work to a number of important professional conferences each year and so to collect this important feedback.

Finally, I will share the results of my research through teaching. I sat on the committee for Murray’s 2017 PhD thesis on the project material from 2010, and as co-supervisor from 2015, and have taught associated material in graduate seminars in the Toronto philosophy department in 2014, ’18, ’21, and ’22. The project takes a fresh look at a wide variety of problems of metaphysics through the mildly cognitively challenging but technically well-understood phenomenon of modal perspective: a number of philosophers have become tuned in to the potential of the RMM program, and I am excited to continue to sustain Toronto’s graduate program as a world center for its investigation, by teaching our graduate students the technical underpinnings of the program and illustrating its capacities.



Family name, Given name

Hellie, Benjamin

## Expected Outcomes

Elaborate on the potential benefits and/or outcomes of your proposed research and/or related activities.

### Scholarly Benefits

Indicate and rank up to 3 scholarly benefits relevant to your proposal.

Rank	Benefit	If "Other", specify
1	Knowledge creation/intellectual outcomes	
2	Enhanced theory	
3	Student training/skill development	

### Social Benefits

Indicate and rank up to 3 social benefits relevant to your proposal.

Rank	Benefit	If "Other", specify
1	Enriched public discourse	
2	Cultural outcomes	
3		

### Audiences

Indicate and rank up to 5 potential target audiences relevant to your proposal.

Rank	Audience	If "Other", specify
1	Academic sector/peers, including scholarly associations	
2	Students	
3	General public	
4		
5		



Family name, Given name

Hellie, Benjamin

## Expected Outcomes Summary

Describe the potential benefits/outcomes (e.g., evolution, effects, potential learning, implications) that could emerge from the proposed research and/or other partnership activities.

The primary aim of the proposed research is to contribute to the exploration of the 'Relativized Metaphysical Modality' (RMM) program. The central doctrine of RMM is that 'modal perspective' is fundamentally involved in a variety of phenomena of central interest to analytic metaphysics: namely, phenomena for which intuition supports a metaphysics of 'bounded naturalism', such that the limits on metaphysical possibility are somehow 'generated' by a combination of abstract, intelligible principles and concrete, brute categorical facts. Talk of the 'generation' of limits on metaphysical possibility cannot be understood as involving matters 'beyond' the limits of metaphysical possibility, because nothing lies beyond these limits: but having recognized the orthogonal 'as-actual' and 'as-counterfactual' dimensions of modal perspective, we can make sense of the limits of the 'as-counterfactual' covarying with options for the 'as-actual'.

Phenomena supportive of bounded naturalism are widespread in metaphysics, ranging from the analysis of law and chance, to the comprehension of individual essence, to the determination of counterfactual truth, to the ontogenesis of the domain of individuals and propositions. Literature on such matters has long been stuck in dialectics between revision of intuitive judgement about these phenomena and revision of intuitive logic. RMM promises to unstick these many dialectics with a single, simple appeal to the well-understood and widely recognized phenomenon of modal perspective.

A secondary outcome will be a deeper understanding of a cluster of interrelated issues in the philosophy of language, including both (a: in 'descriptive semantics') a significant advance in our theory of conditionals and (b: in 'metasemantics') the articulation, modernization, and defense of an adequate framework for formal theory of meaning, apt to represent both logical and pragmatic phenomena in an intensional language.

(a) A pair of independent 'trivialization' arguments (Gibbard's and Williamson's) force a choice among (i) distinguishing the conditional from the material conditional 'not-p or q' (after all, the latter is entailed by q and by not-p, but 'if p, q' intuitively is not); (ii) a semantic analysis of 'if p' as a standard intensional operator; (iii) intuitive data: to wit, conformity to 'conditional proof', or the order-indifference of multiple antecedents. Our best theory of the conditional (Stalnaker's) preserves (i) and (ii) at the expense of (iii); while the theory is serviceable and robust, this choice stands in the way of a full understanding of conditional reasoning. By explaining how we might instead preserve (i) and (iii) at the expense of (ii), the proposed research promises a significant advance on our understanding of an important area of language and cognition.

(b) The manoeuvre required to abandon (ii) displaces the action Stalnaker proposes for 'if p' to a 'postsemantic' stage, posterior to the 'semantic' stage in which a meaning is composed for a full sentence, but prior to the 'pragmatic' stage in which context-sensitive expressions are evaluated. Making room for this intermediate stage (let alone giving it independent motivation) requires considerable delicacy in the articulation of a general framework in theory of meaning. While Lewis's 1980 'Index, context, and content' advances and defends such a framework, a more explicit and modernized presentation and defense will be required for widespread recognition of its details and of the power concealed within it.

Last, and more generally, the proposed research will contribute (in concert with my previous work) to greater appreciation of the philosophical significance of perspective, and the recognition of novel tools for representing it.

## Research team, previous output, and student training

### A. Research team

There is a collaborative component to the proposed research: in the course of the granting period, I will—inter alia—prepare (with Adam Russell Murray, Manitoba, and Jessica M. Wilson, Toronto) a monograph on the ‘Relativized Metaphysical Modality’ (RMM) program; and the various subcomponents of the proposed research are unified under the umbrella of the RMM approach. But (as noted in the ‘Knowledge mobilization’ document) much of my production during the granting period will be individually authored, trades in issues significant also beyond the RMM program, and develops ideas I initially formed prior to my involvement in the program. Accordingly, it seems to me that the costs to be defrayed by the proposed research will be incurred through individual research production (only some of which will involve strictly collaborative activity)—rather than through the joint activity of a research team I would lead.

So, to be explicit, this application does *not* seek funding for a research team; accordingly, I have not listed my collaborators as ‘Participants’ who would participate in the application.

### B. Description of previous and ongoing research results

My research this decade has ranged relatively widely over various subfields of philosophy, addressing questions in perceptual epistemology and phenomenology, metaphysics of perspective, self-reference, ‘metapsychology’ (the ‘psychology of psychology’—what is involved when we think about the mind), practical reasoning theory, the semantics of imperatives, the semantics of deontic modality, the ‘history of David Lewis’, mental causation, the post-1945 history of the mind–body problem, the philosophical and technical foundations of logical theory and theory of meaning, the mind–body problem—as well as a collaborative project in modal logic–metaphysics, with my departmental colleague Jessica M. Wilson and our former co-PhD advisee, Adam Russell Murray (philosophy, Manitoba): this last initially a side project while I completed work on a long-running program in philosophy of mind, now moving to the fore as the issue for the proposed research.

Is there anything to unify it all—in particular, to unify the earlier work’s focus on philosophy of mind with the metaphysical focus of the proposed research? Perhaps surprisingly, yes. In the background of both the earlier work on *mentalism* and the current work on *RMM* is a worry that our philosophical era has too often been significantly off base in its treatment of *perspective*, and that progress on many issues will require setting our understanding aright. The differences in the subject-matter addressed in the mentalism and RMM projects ramify to distinctions between the relevant varieties of perspective; but their common invocation of perspective (in the abstract) makes for a continuity of method: namely, each project makes a fundamental appeal to broadly ‘two-dimensional’ (2D) semantical apparatus in the representation of perspective—with the details differing between the cases, and in each case offering significant novelty vis-a-vis standing proposals in the literature.

As noted in the ‘Knowledge mobilization’ document, I submitted a few months ago a contracted book MS to Oxford UP-USA, titled *Out of This World: Logical Mentalism and the Philosophy of Mind* (‘OOTW’) (I expect reports toward the end of this calendar year): developing this book occupied much of my research time for about ten years. In the mentalism project discussed in OOTW, the relevant variety of ‘perspective’ is that of the individual state of conscious mentality. The endeavour there is to treat this perspective as the explanatory bedrock—in contrast, the book contends, to the tradition of analytic philosophy of mind, which seeks bedrock instead in the totality of facts, or ‘*the (actual) world*’: doing so lifts from the actual world the metaphysical burden of supporting the existence of mentality, thereby whisking away worries about the metaphysics of mind (foremost, the mind–body problem); this in turn undermines an epistemological hypothesis assimilating knowledge of the mental to knowledge of the world (suggesting



instead a competing hypothesis that the mental is by its nature self-knowing). The hypothesis about ‘explanatory bedrock’ is cashed out with a view of *logic* (as good a candidate for bedrock as any) as concerned not with *truth* (as bestowed by the actual world and its ilk, the possible worlds) but rather *endorsement* (as bestowed by my present conscious mental state and its ilk, the intelligible states of consciousness). Replying to the worry that this ‘logical mentalism’ collapses into an unattractive psychologism, I defend a strongly ‘rationalistic’ approach in philosophical psychology, in which mental states are representable (at a certain level of grain) by mathematically simple entities (along the lines of the set-of-worlds proposition). Logical consequence can then be analyzed along relatively familiar two-dimensionalist lines, but with a twist: as preservation of ‘designation’ at all diagonal points, but with ‘designation’ as *endorsement* and points as mental states. This enables the ‘self-knowingness by nature’ of mental states to be represented with an analogue to the familiar *actuality* operator, while off-diagonal points serve as candidates for use in simulating other subjects.

(OOTW folds in and improves upon material from a number of my other most significant career research contributions. Keyed to the numbering system in ‘Research contributions’ subhead 3: contributions 2 and 6 sketch the technical background to logical mentalism, while contribution 2 offers an empirical case for that position; contribution 6 applies that apparatus to the dissolution of the mind–body problem, while contribution 4 applies the associated doctrine to the dissolution of questions about mental causation; contributions 2, 4, 5, and 6 develop aspects of the ‘rationalistic’ approach; and contribution 5 develops the epistemology of mind available to the mentalist.)

The use made of two-dimensionalism in the RMM project is significantly more conservative than the radical application in the mentalism project. In the RMM project, the relevant notion of ‘perspective’ is a more ‘situational’ notion, closer in spirit to the conception explored in the traditional (‘logical realist’) two-dimensionalism of Lewis, Kaplan, and others. The result is more conservative logically than is the doctrine of the mentalist project—logic is still concerned with truth, and indeed a motivating spirit is simplicity and conservatism of logical systems and their semantic analysis—and, where the mentalism project seeks to whisk away metaphysical questions about the mind, the RMM project is instead concerned to face metaphysical questions squarely and address them at face value.

Despite this marked contrast of spirit, the stances of the mentalism and RMM projects are to my mind mutually coherent. A central emphasis of the mentalism project is that the traditional ‘realist’ logic of truth is available within the mentalist logic of endorsement, with the former recoverable by imposing expressive or model-theoretic constraints on mentalist languages or interpretive frameworks. The mentalist is not opposed to the use of possible-world–like entities in the analysis of consequence (as bestowers of ‘designation’); rather, it is the realist who slams the door here, excluding all other entities from this role. Indeed, the mentalist acknowledges that we often reason about ‘objective’, non-mental matters: for this purpose, use of a logic of truth (perhaps with worlds as ‘godlike mental states’?) is appropriate; and, moreover, it is exactly in such cases in which questions of metaphysics naturally arise—the mentalist’s complaint is with extending this style of reasoning beyond its natural home, to reasoning about the mental. Questions for the RMM project arise in reasoning about the non-mental, and thus do not run afoul of these mentalist scruples.

(In an interesting irony, the OOTW and RMM projects can be seen collectively as teasing apart the philosophical aims and technical apparatus of epistemological two-dimensionalism (E2D): the RMM project invokes a truth- and worlds-based logical apparatus familiar from E2D, but in pursuit of issues in metaphysics rather than epistemology and philosophy of mind; while the OOTW project shares with E2D the pursuit of issues in epistemology and philosophy of mind, but contrastingly invokes an endorsement- and mental states-based logical apparatus. E2D therefore stands accused of misfitting its apparatus and its philosophical ambitions: when each is fit instead with its appropriate partner, the result is bifurcation into my pairing of OOTW and RMM.)

The *historical* papers (‘David Lewis and the Kangaroo’; ‘An analytic–hermeneutic history of ‘Consciousness’’) also touch on the philosophical significance of perspective. Each canvases the appearance and evolution of certain tensions in a prominent, recent philosophical corpus—Lewis’s work; the main stream of work on ‘metaphysics of mind’ (Ryle, Smart, Lewis, Kripke, Block, Shoemaker, Nagel, Jackson, Dennett, Harman, Chalmers, and Horgan and Tienson). ‘Kangaroo’ takes as its explanandum a grave, surprising mistake (Arntzenius) about ‘de se attitudes’; ‘Consciousness’ traces the evolving, unstable construction of the putative (to my mind, specious) notion of ‘phenomenality’. Responsibility goes in both cases to the doctrines attacked in the mentalist project: the ‘realist’ logic of truth, the use of the actual world as explanatory bedrock, attendant inabilities to theorize adequately about the perspective of consciousness.

I should note points in past or ongoing work which bear on the development of the proposed papers on philosophy of language (see the ‘Knowledge mobilization’ document).

‘Why and whither’ is a polemical discussion of a technical framework doing ineliminable work in the submitted MS: the overall point there—the core argument, as I understand it, of Lewis’s titanic 1980 ‘Index, context, and content’ (ICC)—is this. If the semantic values of a language have an argument-place free, which is nevertheless saturated in the contents it expresses, that argument-place must be saturated in context, so semantic values cannot be identified with contents. If, moreover, such an argument-place is available for rigidification against intensional operators, then that argument-place is capable only of saturation by context once rigidified, but is capable of binding by operators prior to rigidification, even though the parametric values (time, place, world) in its domain are the same: accordingly, we must recognize a *functional* distinction (and not a merely metaphysical distinction) among types of argument-place, between the unshiftable ‘contextual’ and the shiftable ‘indexical’. But then if indexical arguments are to be saturated by context following semantic composition, they must be converted to contextual arguments—and this happens perforce not during semantic composition, but only afterward: *postsemantically*. (OOTW invokes both indexical and contextual occurrences of a ‘mental state’ parameter—the former to handle iterated psychological reports, the latter to handle the ‘essential self-knowledge’ of a pure first-person perspective.)

‘Triviality’, as noted, invokes a high-powered application of postsemantics. An interest in conditionals is a natural concomitant to an interest in modals; and, in light of the manifest virtues of Stalnaker/Lewis style semantics for the conditional, any approach urging some sort of logical or semantical radicalism inevitably faces the question of how it might do quite as well. The puzzles addressed in this paper are also ones that pose evident threats of different sorts to broadly mainstream, two-dimensional, compositional semantics: Williamson triviality problematizes how natural language indicatives can (with appearances) encode a ‘deduction theorem’ for 2D-style entailments (how  $P \vdash Q$  can require  $\vdash P \rightarrow Q$ ), if an *if*-clause is a nonmonstrous index-shifting operator; while Gibbard triviality problematizes how the order of stacked *if*-clauses can (again, with appearances) be logically unimportant, if an *if*-clause is a ‘local’ (it acts only on its operand and then vanishes) index-shifting operator. The answer: an *if*-clause isn’t an index-shifting operator! With only one *if*-clause and without 2D complications, the Stalnaker index-shifting analysis is correct; but stacked *if*-clauses seem to require some kind of delayed shift; and a deduction theorem seems to require some kind of context shift. The proposed analysis adapts the Stalnaker approach to yield both.

‘Monstrosity’ addresses an age-old question: Kaplan does not defend the ban on monsters, so why insist on it? The Williamsonesque, ‘slingshot’-style argument occurred to me while working on the conditionals paper (perhaps earlier historical investigations—into the Church–Carnap exchange—were in the back of my mind).

‘Apollonian’ proposes in part to significantly expand on cursory remarks in the 2020 RMM survey article. The large amount of time I spent thinking about Lewis’s ‘ICC’ and the place of its subject-matter in the development of the Lewis corpus imbued a sensitivity to neglect of its considerations—to which Lewis

himself was subject, by his own acknowledgement there, in his earlier work—as well as an appreciation of the tremendous mental acrobatics required for Lewis to eventually resolve the grave difficulties addressed. Reading work from the early development of modal metaphysics, this neglect jumps off the page—but then also comes as no surprise. In the course of working up ‘Kangaroo’, I engaged an extensive survey of Lewis’s corpus (with a quantitative component, to represent relations of dependence and mutual relevance of doctrine among his publications), only a small part of which went into that paper; and have taught undergrad and grad seminars on this material in four semesters. So I am well-prepared to do the *Lewis* aspect of this paper (I have also been reading through the recently published volumes of letters, and hope to more fully incorporate their revelations into my investigations before too long). I have taken less of a scholarly interest in Kripke; still, he has published less than Lewis; and while his work also raises enigmas of a different variety than those from Lewis’s, they are more widely discussed: accordingly, the *Kripke* aspect of the paper may be relatively straightforward to develop.

### **C. Description of proposed student training strategies**

The proposed budget contains funds so that I am able to hire a doctoral student at the University of Toronto as a research assistant. There are a number of very capable graduate students in the philosophy program who are interested in metaphysics, philosophy of language, and history of analytic philosophy and who would be well-suited to work on this sort of project.

The research assistant would work closely with me in analyzing literature in metaphysics, phil mind, and the relevant historical period. I would help train the student in research methods, and also train them to write summaries of technical papers in a manner that would help make the ideas easily accessible as the project unfolds over an extended period of time. I would also focus on how to modify technical tools that were not originally developed for the purpose of representing perspective so that they are better suited to such a purpose. This is a difficult skill that takes time to develop.

I see my role in advising the research assistant as helping to provide conditions under which the student can develop their own views, as well as develop useful research skills that can easily be applied to their own work. I would meet with my research assistant frequently, and through such meetings would help to guide their own research.

I would also hope that through such joint research joint papers would emerge: the RMM program already has a strong track record of faculty–student collaboration (Murray, recall, was the doctoral student of Wilson and me; and the founding publication came out of Wilson’s seminar, attended by Murray). Co-authoring would provide an excellent way of helping a graduate student learn how to craft a publishable piece of research. I would also be able to help the student learn how to navigate the publishing process. It is now almost required that a graduate student have some publications in order to be successful in applying for tenure-track jobs. Serving as a research assistant for this project would help in developing the skills required for successfully publishing work during graduate school.

Finally, I have budgeted a large amount of money for the student to travel with me to at least one professional conference during every year of the project. This will provide the student with the opportunity to practice presenting their own work on topics related to the proposed project. Learning to present such work to a wide variety of audiences is critical for the professional development of graduate students. In addition, these conferences would help the students meet and engage with established figures in their field.



Family name, Given name

Hellie, Benjamin

## Funds Requested from SSHRC

For each budget year, estimate as accurately as possible the research costs that you are asking SSHRC to fund through a grant. For each Personnel costs category, enter the number of individuals to be hired and specify the total amount required. For each of the other categories, enter the total amount required.

	Year 1		Year 2		Year 3		Year 4		Year 5	
Personnel costs	No.	Amount	No.	Amount	No.	Amount	No.	Amount	No.	Amount
<b>Student salaries and benefits/Stipends</b>										
Undergraduate										
Masters										
Doctorate	1	17,500	1	17,500	1	17,500	1	17,500	0	0
<b>Non-student salaries and benefits/Stipends</b>										
Postdoctoral										
Other										
<b>Travel and subsistence costs</b>		Year 1	Year 2		Year 3		Year 4		Year 5	
<b>Applicant/Team member(s)</b>										
Canadian travel		1,000		1,000		1,000		1,000		0
Foreign travel		3,000		3,000		4,500		3,000		0
<b>Students</b>										
Canadian travel		1,000		1,000		1,000		1,000		0
Foreign travel		1,500		0		1,500		0		0
<b>Other expenses</b>										
Professional/Technical services										
Supplies										
<b>Non-disposable equipment</b>										
Computer hardware		0		0		2,500		0		0
Other		250		250		250		250		0
<b>Other expenses (specify)</b>										
<b>Total</b>		24,250		22,750		28,250		22,750		0

## **Budget justification**

### **Personnel costs**

I have requested the standard departmental rate, \$17,500 per year, to hire a University of Toronto doctoral student as a research assistant over the full term of the project. There are a number of doctoral students in my department that have research interests suitably related to the themes of my project.

The central duty of the research assistant will be to help me research literature that is relevant to the project. As the relevant literature spans various subfields of philosophy over much of the last half century, the assistance of the research assistant will be critical. They will track down references and write detailed reviews of the most important papers that they identify. They will also compile a master bibliographic file for all of the sources relevant to the project, including many papers I have already identified. This assistance will significantly increase the rate at which my project proceeds.

Our regular discussion of the literature will also very likely lead to opportunities for collaborative work between myself and the research assistant. There are many topics closely related to this research project that I will encourage my research assistant to explore, and which have the potential to lead to several co-authored papers.

I will also rely on the research assistant for editorial assistance. They will be responsible for manuscript preparation and proofreading of articles when they are prepared for submission to journals, and when the final proofs get returned for checking. This will also help the research assistant learn about the publication process, and will help them prepare for publishing their own work.

### **Travel and subsistence costs**

I have budgeted \$1,000 per year for my own travel within Canada to present results from the project, primarily at meetings of the Canadian Philosophical Association (an average of \$500 airfare and ground transportation, \$400 for 3 days in a hotel, and \$100 for three days of meals). Any left over funds from this category will be used for minor research related travel costs. In particular they will be used for short trips to meet with scholars working on related issues at other Canadian universities. For the third year of the project I have budgeted \$4,500 to cover travel to three major professional conferences and workshops in the US and Europe to present the results from the project. For the first, second, and fourth year, I have budgeted \$3,000 for two such trips. The additional trip in the third year reflects the triennial clock of the World Congress and School on Universal Logic (UNILOG): UNILOG is an ideal venue to present some of the results of this research.

I have estimated the average \$1,500 cost of trip as follows. Assuming an average trip length of three days, I expect average airfare and ground transport costs to be \$800, and I have additionally budgeted \$200 for meals and \$500 for a hotel over the three days. There are many different conferences where I expect to send my research to be considered for presentation. In addition to UNILOG, they include the Inland Northwest Philosophy Conference, the Society for Exact Philosophy, and the annual meetings of the American Philosophical Association and the Aristotelian Society–Mind Society Joint Session.

The budget also includes funds for the research assistant to join me on some of these trips. I have allotted \$1,500 for them to travel to at least two conferences outside of Canada that will be held during the term of the project. In addition I have also allotted \$1,000 for them to attend Canadian conferences in each of the years during the term of the project. These conferences will present critical networking opportunities for the student. I expect that by the final two years they will be presenting work of their own related to the research project.

**Other expenses**

I have a well-functioning laptop currently that is absolutely essential to my work. I anticipate that a few years into the project I will be in need of a replacement laptop. I have therefore budgeted \$2,500 in the third year of the project for the purchase of a new laptop and perhaps other related items.

I have also allocated \$250 per year to cover the purchase of books and monographs that I will need to use with regular frequency. While many texts can be obtained through the library, there are those that I will need throughout the project and so will need to purchase.



## Funds from Other Sources

You must include all other sources of funding for the proposed research. Indicate whether these funds have been confirmed or not.

Full organization name Contribution type	Confirmed	Year 1 Year 5	Year 2	Year 3	Year 4
	<input type="checkbox"/>				
	<input type="checkbox"/>				
	<input type="checkbox"/>				
	<input type="checkbox"/>				
	<input type="checkbox"/>				
	<input type="checkbox"/>				
	<input type="checkbox"/>				
	<input type="checkbox"/>				
<b>Total funds from other sources</b>		0	0	0	0
		0			

Personal information will be stored in the Personal Information Bank for the appropriate program.

Application WEB



## Suggested Reviewers

List Canadian or foreign specialists whom SSHRC may ask to assess your proposal.

List keywords that best describe the assessor's areas of research expertise. Please refer to the Suggested Assessors section of the detailed instructions for more information on conflicts of interest.

Family name <b>Nathan</b>		Given name <b>Salmon</b>		Initials	Title <b>Professor</b>
Org. code	Full organization name <b>University of California Santa Barbara</b>		Keywords <b>philosophy of language; metaphysics; existence; modality; essence; singular propositions; semantics; context; propositions; meaning</b>		
Department/Division name <b>Philosophy</b>			Address <b>Department of Philosophy University of California</b>		
Country code <b>1</b>		Area code <b>805</b>	Number <b>8934028</b>	Extension	
Telephone number		City/Municipality <b>Santa Barbara</b>		Prov./State <b>CA</b>	Postal/Zip code <b>931063090</b>
Fax number		Country <b>UNITED STATES</b>			
E-mail <b>nsalmon@philosophy.ucsb.edu</b>					
Family name <b>Forbes</b>		Given name <b>Graeme</b>		Initials	Title <b>Professor</b>
Org. code	Full organization name <b>University of Colorado Boulder</b>		Keywords <b>counterparts; metaphysics; attitudes; propositions; reference; modality; quantification; context; pragmatics</b>		
Department/Division name <b>Philosophy</b>			Address <b>CU Boulder Philosophy Hellems 169 UCB 232</b>		
Country code <b>1</b>		Area code <b>303</b>	Number <b>4927120</b>	Extension	
Telephone number		City/Municipality <b>Boulder</b>		Prov./State <b>CO</b>	Postal/Zip code <b>803090232</b>
Fax number		Country <b>UNITED STATES</b>			
E-mail <b>graeme.forbes@colorado.edu</b>					
Family name		Given name		Initials	Title
Org. code	Full organization name		Keywords		
Department/Division name			Address		
Country code		Area code	Number	Extension	
Telephone number		City/Municipality		Prov./State	Postal/Zip code
Fax number		Country			
E-mail					

Personal information will be stored in the Personal Information Bank for the appropriate program.

Application WEB





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Internal use	CID (if known)
539736	169692

## Identification

Only the information in the Name section will be made available to selection committee members and external assessors. Citizenship and Statistical and Administrative Information will be used by SSHRC for administrative and statistical purposes only. Filling out the statistical and Administrative Information section is optional.

### Name

Family name	Given name	Initials
Hellie	Benjamin	

### Citizenship - Applicants and co-applicants must indicate their citizenship status by checking and answering the applicable questions.

Citizenship status	<input checked="" type="radio"/> Canadian	<input type="radio"/> Permanent resident since (yyyy/mm/dd)	<input type="radio"/> Other (country)	Have you applied for permanent residency?
				<input type="radio"/> Yes <input type="radio"/> No

### Statistical and Administrative Information

Permanent postal code in Canada (i.e. K2P1G4)	Correspondence language	Previous contact with SSHRC? (i.e. applicant, assessor, etc.)
M6J1N6	<input checked="" type="radio"/> English <input type="radio"/> French	<input type="radio"/> Yes <input checked="" type="radio"/> No

Full name used during previous contact, if different from above

## Contact Information

The following information will help us to contact you more rapidly. Secondary information will not be released by SSHRC without your express consent.

Primary telephone number				Secondary telephone number			
Country code	Area code	Number	Extension	Country code	Area code	Number	Extension
	647	544-2365					
Primary fax number				Secondary fax number			
Country code	Area code	Number	Extension	Country code	Area code	Number	Extension
	416	978-8703					
Primary E-mail benj.hellie@utoronto.ca							
Secondary E-mail							



**Do not photocopy this page.**

Family name, Given name

Hellie, Benjamin

<b>Current Address</b> Use only if you are not affiliated with a department at a Canadian university. (If you are affiliated with a department at a Canadian university, the department's mailing address will be used.) If you wish to use another address, specify it under the Correspondence Address.			<b>Correspondence Address</b> Complete this section if you wish your correspondence to be sent to an address other than your current address.		
Address			Address		
			Philosophy Department		
			Jackman Humanities Building		
			170 St George St		
City/Municipality	Prov. / State	Postal/Zip code	City/Municipality	Prov. / State	Postal/Zip code
			Toronto	ON	M5R2M8
Country CANADA			Country CANADA		
<b>Temporary Address</b> If providing a temporary address, phone number and/or E-mail, ensure that you enter the effective dates.			<b>Permanent Address in CANADA</b>		
Address			Address		
			44 Argyle St		
City/Municipality	Prov. / State	Postal/Zip code	City/Municipality	Prov. / State	Postal/Zip code
			Toronto	ON	M6J1N6
Country			Country CANADA		
Start date (yyyy/mm/dd)	End date (yyyy/mm/dd)	Temporary telephone/fax number			
		Country code	Area code	Number	Extension
Temporary E-mail					



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Family name, Given name

Hellie, Benjamin

## Research Expertise (optional)

The information provided in this section refers to your own research expertise, not to a research proposal. Filling out the following 4 sections is optional. This page will not be seen by selection committee members and external assessors. This section will be used for planning and evaluating programs, producing statistics, and selecting external assessors and committee members.

### Areas of Research

Indicate and rank up to 3 areas of research that best correspond to your research interests as well as areas where your research interests would apply. Duplicate entries are not permitted.

Rank	Code	Area
1	000	Not Subject to Research Classification
2		
3		

### Temporal Periods

If applicable, indicate up to 2 historical periods covered by your research interests.

From				To			
Year				Year			
	1879	BC	AD		1966	BC	AD
	1942	<input type="radio"/>	<input checked="" type="radio"/>		1983	<input type="radio"/>	<input checked="" type="radio"/>

### Geographical Regions

If applicable, indicate and rank up to 3 geographical regions covered by your research interests. Duplicate entries are not permitted.

Rank	Code	Region
1		
2		
3		

### Countries

If applicable, indicate and rank up to 5 countries covered by your research interests. Duplicate entries are not permitted.

Rank	Code	Countries	Prov./ State
1			
2			
3			
4			
5			



Family name, Given name

Hellie, Benjamin

## Curriculum Vitae

### Language Proficiency

	Read	Write	Speak	Comprehend aurally	Other languages
English	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	German: basic reading and communication
French	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

### Work Experience

List the positions, academic and non-academic, you have held beginning with the current position and all previous positions in reverse chronological order, based on the start year.

Current position		Start date (yyyy/mm)
Full Professor		2005/7
Org. code	Full organization name	
1350911	University of Toronto	
Department/Division name		
Philosophy		
Position type	Employment status	
<input checked="" type="radio"/> Tenured <input type="radio"/> Non-tenure <input type="radio"/> Tenure-track <input type="radio"/> Non-academic	<input checked="" type="radio"/> Full-time <input type="radio"/> Part-time <input type="radio"/> Non-salaried <input type="radio"/> Leave of absence	
Position	Start date (yyyy/mm)	End date (yyyy/mm)
Visiting Researcher	2020/1	2020/3
Org. code	Full organization name	
9191112	Universidad Complutense de Madrid	
Department/Division name		
Department of Logic and Theoretical Philosophy		
Position	Start date (yyyy/mm)	End date (yyyy/mm)
Visiting Fellow	2018/3	2018/4
Org. code	Full organization name	
9837105	National Autonomous University of Mexico	
Department/division name		
Instituto de Investigaciones Filosoficas		
Position	Start date (yyyy/mm)	End date (yyyy/mm)
Visiting Scholar	2014/8	2014/8
Org. code	Full organization name	
9122046	University of Edinburgh	
Department/Division name		
Philosophy		

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Family name, Given name

Hellie, Benjamin

## Work Experience (cont'd)

Position		Start date (yyyy/mm)	End date (yyyy/mm)
Visiting Fellow		2013/4	2013/7
Org. code	Full organization name		
9122028	University of St Andrews		
Department/Division name			
Arché Centre for Logic, Language, Metaphysics, and Epistemology			
Position		Start date (yyyy/mm)	End date (yyyy/mm)
Invited Director, Graduate Summer School		2011/7	2011/7
Org. code	Full organization name		
9251001	University of Latvia		
Department/Division name			
Center for the Cognitive Sciences and Semantics (CCSS)			
Position		Start date (yyyy/mm)	End date (yyyy/mm)
Visiting Professor		2009/6	2009/7
Org. code	Full organization name		
9191104	University of Barcelona		
Department/Division name			
LOGOS Group			
Position		Start date (yyyy/mm)	End date (yyyy/mm)
Visiting Fellow		2007/9	2007/9
Org. code	Full organization name		
9661101	Australian National University		
Department/Division name			
Research School of Social Sciences			
Position		Start date (yyyy/mm)	End date (yyyy/mm)
Assistant Professor		2000/9	2005/9
Org. code	Full organization name		
9931102	Cornell University		
Department/Division name			
Sage School of Philosophy			



Family name, Given name

Hellie, Benjamin

## Academic Background

List up to 5 degrees, beginning with the highest degree first and all others in reverse chronological order, based on the start date.

Degree type	Degree name	Start date (yyyy/mm)	Expected date (yyyy/mm)	Awarded date (yyyy/mm)
Doctorate	Ph.D.	1995/09		2001/11
Disc. code	Discipline	Did SSHRC support enable you to get this degree?		
55000	Philosophy	<input type="radio"/> Yes <input checked="" type="radio"/> No		
Org. code	Organization			
9932101	Princeton University			
Country	UNITED STATES			
Degree type	Degree name	Start date (yyyy/mm)	Expected date (yyyy/mm)	Awarded date (yyyy/mm)
BA Hon.	B.A. with departmental honors	1990/09		1994/05
Disc. code	Discipline	Did SSHRC support enable you to get this degree?		
55000	Philosophy	<input type="radio"/> Yes <input checked="" type="radio"/> No		
Org. code	Organization			
9983108	Stanford University			
Country	UNITED STATES			
Degree type	Degree name	Start date (yyyy/mm)	Expected date (yyyy/mm)	Awarded date (yyyy/mm)
Disc. code	Discipline	Did SSHRC support enable you to get this degree?		
		<input type="radio"/> Yes <input type="radio"/> No		
Org. code	Organization			
Country				
Degree type	Degree name	Start date (yyyy/mm)	Expected date (yyyy/mm)	Awarded date (yyyy/mm)
Disc. code	Discipline	Did SSHRC support enable you to get this degree?		
		<input type="radio"/> Yes <input type="radio"/> No		
Org. code	Organization			
Country				
Degree type	Degree name	Start date (yyyy/mm)	Expected date (yyyy/mm)	Awarded date (yyyy/mm)
Disc. code	Discipline	Did SSHRC support enable you to get this degree?		
		<input type="radio"/> Yes <input type="radio"/> No		
Org. code	Organization			
Country				

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Family name, Given name

Hellie, Benjamin

## Credentials

List up to 6 licences, professional designations, awards and distinctions you have received and feel would be the most pertinent to the adjudication of your application. List them in reverse chronological order, based on the year awarded.

Category	Name	Source or Country	Duration (Months)	Value / Year awarded
Fellowship	Visiting fellow, UNAM, Inst Invest Filosoficas	University MEXICO	1	\$2,000 2018
Professional Designation	Invited Director, 2011 Mind/Lang Summer School	University LATVIA	1	\$0 2008
Fellowship	Visiting fellow, ANU, Rsch Schl Soc Sci	University AUSTRALIA	3	\$5,500 2008
Fellowship	Visiting fellow, ANU, Centre for Consciousness	University AUSTRALIA	3	\$5,500 2006

## Research Expertise

The information provided in this section refers to your own research expertise, not to a research proposal.

### Keywords

List keywords that best describe your areas of research expertise. Separate keywords with a semicolon.

philos of mind; philos of perception; action theory; consciousness; epistemology; history of analytic philosophy; philos of language; semantics

### Disciplines

Indicate and rank up to 5 disciplines that best correspond to your research interests. Duplicate entries are not permitted.

Rank	Code	Discipline	If Other, specify
1	55000	Philosophy	
2	55002	Analytical Philosophy, Linguistic Philosophy	
3	55099	Other Philosophy	Philosophy of mind
4	55010	History of Philosophy	
5	55006	Epistemology	



Family name, Given name

Hellie, Benjamin

## Funded Research

List up to 8 grants or contracts you have received from SSHRC or other sources. List them in reverse chronological order, based on the year awarded. If you are not the applicant (principal investigator), specify that persons' name.

Org. code	Full name of funding organization	Year awarded (yyyy)	Total amount (CAN\$)
1	VP Research UT Scarborough	2020	\$7,500
Role	Applicant	Completion status	<input checked="" type="checkbox"/> Complete
Project title	Philosophical applications of perspective		
Applicant's family name	Applicant's given name	Initials	
Org. code	Full name of funding organization	Year awarded (yyyy)	Total amount (CAN\$)
1	VP Research UT Scarborough	2018	\$12,000
Role	Applicant	Completion status	<input checked="" type="checkbox"/> Complete
Project title	Logic and philosophy of mind		
Applicant's family name	Applicant's given name	Initials	
Org. code	Full name of funding organization	Year awarded (yyyy)	Total amount (CAN\$)
3010325	Social Sciences and Humanities Research Council of Canada	2011	\$55,595
Role	Applicant	Completion status	<input checked="" type="checkbox"/> Complete
Project title	Conscious life		
Applicant's family name	Applicant's given name	Initials	
Org. code	Full name of funding organization	Year awarded (yyyy)	Total amount (CAN\$)
3010325	Social Sciences and Humanities Research Council of Canada	2007	\$38,500
Role	Applicant	Completion status	<input checked="" type="checkbox"/> Complete
Project title	The Slightest Philosophy		
Applicant's family name	Applicant's given name	Initials	

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Family name, Given name

Hellie, Benjamin

## Funded Research (cont'd)

Org. code	Full name of funding organization	Year awarded (yyyy)	Total amount (CAN\$)
1	University of Toronto: Connaught Matching	2006	\$10,000
Role	Applicant	Completion status	<input checked="" type="checkbox"/> Complete
Project title	Acquaintance and its place in consciousness		
Applicant's family name	Applicant's given name	Initials	
Org. code	Full name of funding organization	Year awarded (yyyy)	Total amount (CAN\$)
1	University of Toronto: Connaught Startup	2005	\$10,000
Role	Applicant	Completion status	<input checked="" type="checkbox"/> Complete
Project title	Issues in consciousness and perception		
Applicant's family name	Applicant's given name	Initials	
Org. code	Full name of funding organization	Year awarded (yyyy)	Total amount (CAN\$)
Role		Completion status	<input type="checkbox"/> Complete
Project title			
Applicant's family name	Applicant's given name	Initials	
Org. code	Full name of funding organization	Year awarded (yyyy)	Total amount (CAN\$)
Role		Completion status	<input type="checkbox"/> Complete
Project title			
Applicant's family name	Applicant's given name	Initials	

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## Research contributions

### 1. Relevant research contributions over the last six years

#### Refereed contributions

‘Relativized metaphysical modality: Index and context’, with Adam Russell Murray and Jessica M. Wilson, in Otávio Bueno and Scott Shalikowski, editors, *The Routledge Handbook of Modality*, pp. 82–99. London: Routledge, 2020.

‘An analytic-hermeneutic history of Consciousness’, in Kelly Michael Becker and Iain Thomson, editors, *The Cambridge History of Philosophy, 1945 to 2010*, 74–81. Cambridge: Cambridge University Press, 2019.

‘Semantic gaps and protosemantics’, in Acacio de Barros and Carlos Montemayor, editors, *Quanta and Mind: Essays on the Connection between Quantum Mechanics and Consciousness*, pp. 201–221. Berlin: Springer, 2019.

‘Praxeology, imperatives, and shifts of view’, in Rowland Stout, editor, *Process, Action, and Experience*, pp. 185–209. Oxford: Oxford University Press, 2018.

‘David Lewis and the Kangaroo: Graphing philosophical progress’, in Russell Blackford and Damien Broderick, editors, *Philosophy’s Future: The Problem of Philosophical Progress*, pp. 213–225. New York: Blackwell, 2017.

‘Rationalization and the Ross Paradox’, in Nate Charlow and Matthew Chrisman, editors, *Epistemic Modality*, pp. 283–323. Oxford: Oxford University Press, 2016.

‘Obligation and aspect’, *Inquiry* 59:398–449, 2016.

#### Non-refereed contributions (all academic talks or commentaries)

2021 Consciousness does not have a metaphysics, Oxford Metaphysics of Consciousness Seminar Series, Faculty of Philosophy, University of Oxford

Manufacturing defects, with Jessica Wilson: Invited Symposium on Pseudoproblems in Metaphysics (co-symposiasts, Amie Thomasson and LA Paul), APA Central Division

2020 Endorsement logic and the new deflationism: co-keynote address, *Is Metaphysics Indispensable?* workshop, Department of Logic and Theoretical Philosophy, Complutense University of Madrid, Spain (postponed due to COVID-19)

Dissolving the mind–body problem by repairing logic: International Speaker Series, Department of Philosophy, National Research University, Higher School of Economics, Moscow, Russia (postponed due to COVID-19)

Mentalist logic of belief reports: Department of Philosophy, University of Gothenburg, Sweden (postponed due to COVID-19)

2019 Emergence and metapsychological expressivism: *Rethinking Emergence* conference, University of Lisbon, Portugal

Semantic gaps and protosemantics: (i) *Russell* workshop, Healdsburg, CA; (ii) *Mind and Action* conference, Department of Philosophy, Shandong University, Jinan, China; (iii) *Ranch Metaphysics* workshop, White Stallion Ranch, Tucson, AZ, with comments by John Bengson (Wisconsin–Madison)

Comment on Daniel Stoljar, Pessimism about philosophical progress—Why is it so widespread?: *Philosophical Progress* workshop, ConceptLab and University of Tokyo, Tokyo

Comment on David Boylan, Putting ‘ought’s together: APA Pacific Division, Vancouver

- 2018 Has analytic philosophy *created* the ‘hard problem of consciousness’?: Seminario de Investigadores, Instituto de Investigaciones Filosóficas, UNAM, CDMX, Mexico

Reasoning about conditionals and conditional reasoning: Seminario de Filosofía del Lenguaje, Instituto de Investigaciones Filosóficas, UNAM, CDMX, Mexico

- 2017 The semantic defectiveness of ‘Grounding’ and ‘Consciousness’, with Jessica Wilson: (i) *Grounding and Consciousness* workshop/conference, Department of Philosophy, NYU, La Pietra, Florence, Italy, with comments by Catharine Diehl (Humboldt) and Lisa Vogt (Barcelona/LOGOS); (ii) Canadian Philosophical Association, Toronto

From externalism to expressivism: *CaSE: Consciousness and Semantic Externalism* workshop, Department of Philosophy, NYU

Benj Hellie’s ‘There it is’: respondent at discussion session, led by Philipp Blum (Lucerne), at *Cogito: Yes or No?* workshop/conference, Department of Philosophy, University of Geneva, Ligerz, Switzerland

Endorsement-logic, simulationism, and the *cogito*: *Cogito: Yes or No?* workshop/conference, Department of Philosophy, University of Geneva, Ligerz, Switzerland

- 2016 Deconstructing intensions: *Wilson–Hellie* workshop, Department of Philosophy, University of Edinburgh, Scotland

Above the verb with endorsement theory: *Aspect and Modality* workshop, Departments of Philosophy and Linguistics, University of Western Michigan, Lansing, MI

### Forthcoming contributions

*Out of This World: Logical Mentalism and the Philosophy of Mind*, submitted for review to New York: Oxford University Press (under contract).

### 3. Most significant career research contributions

1. *Out of This World: Logical Mentalism and the Philosophy of Mind*, submitted for review to New York: Oxford University Press (under contract).

‘Logical mentalism’ is the doctrine that what is preserved under a logically valid argument is not *truth* (a nonmental, objective matter) but rather *endorsement* (a mental, subjective matter). The book explores the doctrine in various aspects: technical, foundational, and in potential application to the philosophy of mind. On the technical side, I propose to interpret mentalism by unifying familiar ‘two-dimensionalist’ apparatus with a novel, broadly algebraic approach to ‘points of evaluation’, and propose a certain sort of effect with *negation* as characteristically mental. On the foundational side, I note that mentalism is without allure absent a strongly rationalist conception of mentality, and explore in some detail a ‘simulationist’ theory apt to secure the conception. On the applied side, I offer a semantics for mental reports within logical mentalism adequate to this simulationism, and then discuss how the resulting package dispells various long-standing vexations in the metaphysics and epistemology of mind. (This work adapts, updates, and synthesizes material from contributions (2) and (4)–(6).)

2. ‘Rationalization and the Ross Paradox’, in Nate Charlow and Matthew Chrisman, editors, *Epistemic Modality*, pp. 283–323. Oxford: Oxford University Press, 2016.

The ‘Ross Paradox’ is the failure of ‘weakening’ for imperatives: ‘pay the rent!’ does not entail ‘pay the rent or drink up my wine!’. I postulate a novel kind of content for imperatives, the ‘granulated proposition’ consisting of a partition together with a proposition fusing some of its cells, to explain this logical oddity. I then move ‘backward’ and ‘forward’: ‘backward’, to explain what it is about practical reason that requires contents of *intention* to involve the partition, and what it is about theoretical reason that does not require this of the contents of *belief*; and ‘forward’, to explain other manifestations of Ross-paradoxicality: in the speech act of *command*, in ‘obligative’ uses of *must*, and in avowals of intention.

3. ‘Relativized metaphysical modality: Index and context’, with Adam Russell Murray and Jessica M. Wilson, in Otávio Bueno and Scott Shalikowski, editors, *The Routledge Handbook of Modality*, pp. 82–99. London: Routledge, 2020.

We consider three sorts of puzzle for the ‘simplest, strongest’, S5/Barcanite logic of modality, individuation, and existence: an *undermining* puzzle involving laws of nature for the propositional subfragment; *Chisholm’s paradox* of moderate material origin essentialism for the referential subfragment; and apparent *contingent existence/nonexistence* as a challenge to the full quantificational fragment. These puzzles have long seemed intractable, but we argue that a critical technical resource, otherwise needed, has been inadequately exploited—namely, ‘context-sensitivity’. With this (broadly ‘two-dimensionalist’) resource in hand, our metaphysics and our logic need not clash.

4. ‘Praxeology, imperatives, and shifts of view’, in Rowland Stout, editor, *Process, Action, and Experience*, pp. 185–209. Oxford: Oxford University Press, 2018.

Michael Thompson claims that the basic linguistic form of practical reason is ‘I am A-ing because I am B-ing’; recent discussion has drawn on this claim to support a ‘processive’ metaphysics of action to compete with Davidsonian ‘event-causal’ metaphysics. But more basic than this is ‘bare imperatival implication’: ‘A! —so, B!’. But a ‘bare imperative’ does not characterize anything about the world, so there can be no metaphysics of action. Instead, these bare imperatives are ‘radically first-personal’; the role of practical reason in *explaining* agentive behavior essentially requires a ‘shift of view’ between the radical first person and the ‘objective’ third person, mediated by the direct-realist ‘perceptual given’.

5. (a) ‘There it is’, *Philosophical Issues* 21:110–64, 2011; and sequels: (b) ‘It’s still there!’, and ‘Yep—still there’, in Richard Brown, editor, *Consciousness Inside and Out*, pp. 127–36 and 163–9. Berlin: Springer-Verlag, 2014; (c) ‘Love in the time of cholera’, in Berit Brogaard, editor, *Does Perception Have Content?*, pp. 242–61. Oxford: Oxford University Press, 2014.

These papers consider ‘direct realist’ philosophies of perception, understood so that perceptual content is *factive* and *external-world concerning*. First: without *factivity* perception cannot do its work in rationalizing belief and ‘anchoring’ agency to the body of the agent; and there is no hope of resolving attendant difficulties arising from ‘hallucination’ by retreating from *externality*. Second: such cases show that sometimes, one’s picture of the world is incoherent, involving mutual incompatibility of perceptually given facts with their rationally downstream ‘interpretation’: the difficulty here is that this is never part of how one finds one’s mental state to be, but is only noticed by external interpreters—discomfitingly, if the goal of the external interpreter is to characterize how one finds one’s mental state to be; this lends support to an metapsychological expressivism, on which the apparent clash need not be resolved.

6. ‘Semantic gaps and protosemantics’, in Acacio de Barros and Carlos Montemayor, editors, *Quanta and Mind: Essays on the Connection between Quantum Mechanics and Consciousness*, pp. 201–221. Berlin: Springer, 2019.

This paper exploits the post-Kripkean, ‘algebraic’ resource of propositional points of evaluation, as embedded in a classical two-dimensionalist framework, on behalf of metapsychological expressivism, and uses the resulting analysis to analyze various putative ‘semantic gaps’ between the mental and physical, and then to interrupt attendant arguments for mind–body dualism.

#### **4. Career interruptions and special circumstances**

None

#### **5. Contributions to training**

At the University of Toronto over the last six years, I have been involved in a number of PhD committees, some in a supervisory role, others as a member of the committee.

From 2018, I have chaired the committee of Zach Weinstein. The project, in aesthetics, takes off from the approach in ‘rational psychology’ outlined in my ‘Rationalization and the Ross Paradox’, and is concerned with the ‘enigmatic’ character of modern artwork: its elusiveness in regard to complete or determinate characterizations of meaning, and the manner of aesthetic value this conveys to its audience.

From 2015, I served as the co-supervisor (with Jessica M. Wilson) of the dissertation by Adam Russell Murray, successfully defended in 2017: Murray has been employed since 2018 as an Assistant Professor (tenure track) at University of Manitoba. This supervision resulted in the co-authored paper (3), above; developing the program it surveys is the aim of the proposed research for the granting period.

From 2019 and 2018, respectively, I have sat on the thesis committees of two students: Eliran Haziza, who is working on the semantics and pragmatics of questions, and Andrew Lavigne, who is working on the philosophy of linguistics; and in AY 2021–22, I sit on the qualifying committee of Dwight Crowell, who is working on the metaphysics of ‘Russellian Monism’.

From 2012, I sat on the thesis committee of Dan Rabinoff, supervised by Jessica M. Wilson, who defended his thesis on the logic and metaphysics of relative identity in 2020: Rabinoff has found employment as an ‘ontological engineer’.

From 2010 to the 2015 defense, I sat on the thesis committee of Luke Roelofs, co-supervised by Bill Seager and Jessica M. Wilson: Roelofs, who wrote on the ‘combination problem’ for panpsychism, has converted the thesis into a published book (Oxford UP), and is now on a post-doc at NYU, following a first post-doc at ANU and a second at Bonn.