In the philosophical literature on action and on practical psychology—collectively, praxeology—Anscombe’s monumental but difficult work *Intention* (Anscombe 1963) was for at least four decades significantly subordinated in attention to Davidson’s series of papers following ‘Actions, reasons, and causes’ (Davidson 1980). It was during this period that the seminal works were prepared in the formal theory of *practical language*—imperative sentences, deontic modals, instructions, expressions of intention, and their conversational use. Accordingly, the literature on practical language unfolds against a background of broadly Davidsonian praxeology, with the penetration of Anscombean ideas comparatively negligible.

To my mind, this imbalance of focus has significantly retarded our understanding of practical language. For Davidson explicitly saw his praxeology as a philosophical application of the classical von Neumann-Morgenstern decision theory. And to my mind, classical decision theory is risibly inadequate to the complexity of practical rationality—in contrast with the richly detailed and phenomenologically plausible structures mapped out by Anscombe.

Unfortunately, the assimilation of Anscombean praxeology into the formal theory of practical language faces a significant hurdle. The classical approach (section 1.2), based around a ‘sphere of permissibility’ which it is the aim of action to actualize, by contrast, is ‘means-indifferent’, depicting practical psychology as ‘ballistic’.

Our alternative to the classical theory of entailment is *mindset semantics* (section 2.1), according to which entail-
ment is rationally-mandatory conditional acceptance or support-preservation. Support-preservation is flexible enough to accommodate non-propositional and noninformational entailment. The tried and true classical approach is, of course, to be tampered with only cautiously. Fortunately, mindset semantics is a fairly conservative adjustment, departing from the classical approach only in ways that make for a more harmonious fit with Stalnakean pragmatics (Stalnaker 1970, 1975, 1998).1

With mindset semantics in hand, we (section 2.2) implement imperative entailment first through a ‘solipsistic pragmatics’. The central device is the context-as-‘conversational scoreboard’ (Lewis 1979b) sharpened to incorporate a parameter largely in line with Portner’s ‘to-do list’ (Portner 2007). The equivalence between a self-directed imperative and an expression of reflexive intention is secured through a ‘rigidifying’ operator resembling Veltman’s ‘tests of context’ (Veltman 1996).

We next (section 3) extend our understanding of the solipsistic practical-rationalizing links between governing and implementing reflexive intentions to the social pragmatics of command. The approach extrapolates Stalnaker’s ‘common ground’ of beliefs held by a collective inquirer to a ‘common project’ of intentions held by a collective agent brought about through the ‘incorporation’ of the parties of the conversation. According to the view, when I give Fred a command, this manifests not an impossible solipsistic intention I harbor regarding Fred, but rather (my estimation of) our corporate intention for Fred.

We finally (section 4) apply the assembled apparatus to technical puzzles from the literature on practical language. We begin (4.1) with three puzzles about entailment. The first subsection extracts from our apparatus an immediate solution to the Ross paradox. Our package of Anscombean praxeology with mindset semantics makes practical entailment recapitulate rational conditional requirements on intention. These requirements are structured by practical optimality rather than by informational strength, so that there is no reason to suppose ‘post this letter’ entails ‘post or burn this letter’.

We turn next to the puzzle of free-choice permission: why ‘you may have an apple or a pear’ is ordinarily only felicitous when the addressee may have an apple and may have a pear—in contrast with the usual behavior of ‘or’, which requires only one disjunct. The question requires a treatment of deontic modals, which we argue to be modalized imperatives. But if imperatives have action-kinds as their contents, this requires a non-standard treatment of modals; fortunately, according to mindset semantics, modals quantify over contexts rather than worlds. We can then see that while the conjunctive behavior of a free-choice permission is not an entailment, only relatively discomfiting scenarios are counterexamples to entailment.

Our last puzzle about entailment concerns hedging: we often respond to uncertainty by settling for second-best. Hedging has been argued to undermine modus ponens (Kolodny and MacFarlane 2010). A treatment of hedging using our apparatus reveals no distinctive link to the conditional; extending our apparatus for modals to accommodate the conditional along lines developed by Kratzer (1991) validates modus ponens. The true lesson of hedging is argued to be the need for a notion of entailment more liberal than truth-preservation.

The chapter concludes (4.2) with a discussion of imperatives used outside of command: in advice, an affiliation with ‘if I were you’-conditionals reveals a ‘positional shift’ by the speaker to the point of view of the addressee; in permission, an affiliation with a double embedding of ‘if I were you’- under ‘if you like’-conditionals reveals a hybrid of positional shift and ‘biscuit’-type behavior.

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1Support-preservation is, very roughly, a compromise between truth-preservation and Stalnaker’s notion of ‘reasonable inference’ (Stalnaker 1975).
1 **Intention** and intention

The aim in this chapter is not to engage in exegesis or defense of Anscombean praxeology, but rather to illustrate an approach to the formal study of practical language developed in accord with broadly Anscombean themes. Accordingly, our discussion of Anscombean praxeology is limited to the highlighting of certain Anscombean assumptions we will be taking on board and of certain broadly Davidsonian assumptions we will reject. My aim in doing so is to flag a range of fundamental philosophical junctures at which the approach in this chapter diverges from what are, as best I can tell, doctrines widely presupposed in the formal literature on practical language. The reader concerned to explore the praxeological issues in greater depth will find suggestions in this footnote.²

The central doctrines we take from Anscombe’s *Intention* are these (citations to section-numbers in *Intention*):

1.  
   (a) Action is intentional ‘under a description’ (23);
   (b) One’s intentions are ‘known without observation’—so that one knows oneself to intend to make tea if one does (8);
   (c) An avowal of intention such as ‘I intend to make tea’ expresses the intention it avows (1);
   (d) There is no significant difference in subject-matter between ‘I am making tea’ and ‘I intend to make tea’ (23);
   (e) If one is making tea (intentionally), one is exercising one’s knowledge how to make tea (48);
   (f) What rationalizes an action is (generally) the governing action it implements (26);³
   (g) What implements an action is a course of actions it rationalizes (26)

Assumptions of a broadly ‘Davidsonian’ cast to which the Anscombean approach is generally inhospitable include (citations to section-numbers in *Intention* where they are rejected):

2.  
   (a) A single ‘yardstick of value’—such as ‘utility’— governs all practical rationalization, even within the life of a single individual (39);
   (b) Rationalization flows solely from means-indifferent end-states at which behavior is aimed (44);
   (c) There are ‘basic actions’: elemental ballistic motions out of which other courses of agentive behavior are built (26);
   (d) The agent understands her intentions as a mere ‘internal template’ which give rise to the behaviors she finds her body coursing through (27);
   (e) Some ‘purely internal state’—trying or wanting—exhausts the conative side of mental life (35)

Note that we do not endorse all of Anscombe’s praxelogical or practical-linguistic theses; less still those of neo-Anscombeans.⁴

²Obviously the place to begin is Anscombe 1963. Somewhat easier to process and with the benefit of the post-*Intention* literature as a point of contrast is Thompson 2008. A collection with a number of helpful essays is Ford et al. 2011.

³Though at the ‘top level’, rationalizing power flows downward from one’s identity—sometimes as a human being though also often as a participant in a certain walk of life (35).

⁴In particular, the research program reported in the current chapter was set in motion in an attempt to evaluate various Anscombean and neo-Anscombean doctrines about practical language and progressive morphology: for example, Thompson (2008, section 2), apparently following Anscombe (1963, page 39), buys into the ‘imperfective paradox’ (contrast our discussion at page 4); Thompson’s speculations (section 5) about the logical relations among ‘I am Γ-ing’, ‘I intend to Γ’, ‘I am trying to Γ’, and ‘I want to Γ’ while suggestive, are both empirically questionable and formally blurry.
1.1 Intention: content and force

We commence by arguing that the content of an intention is an action-kind, representable by a set of world, interval pairs; and that the ‘force’ of, or rational mandate imposed by, an intention is a requirement to form further implementing intentions in line with one’s knowhow and beliefs.

1.1.1 Content

The content of an intention, let us assume, is the same as the content of the complement of an expression of that intention. For an expression of other-directed intention like ‘I intend Fred to open the door’, the complement is the infinitival clause ‘Fred to open the door’; for an expression of reflexive intention like ‘I intend (myself) to open the door’, the complement is ‘oneself to open the door’. The content of an intention for Fred to open the door, then, is that of ‘Fred to open the door’; the content of a reflexive intention to open the door is that of ‘oneself to open the door’.

These infinitival clauses lack tense, and so are not sentences. It is plausible therefore that their contents are less determinate than the contents of sentences like ‘Fred opened the door’ or ‘I (myself) opened the door’. The contents of these sentences are propositions, which we will assume to be (or be representable with) sets of possible worlds. Strictly speaking, it is the sentence’s content against a context that is a proposition: against a context $c$ with time $t_c$ and speaker $s_c$, the content of ‘Fred opened the door’ is the set containing a world $w$ just if, in $w$, Fred opens the door at some time prior to $t_c$, while that of ‘I opened the door’ is the set containing $w$ just if, in $w$, $s_c$ opens that door at some time before $t_c$. (The ‘time of the context’ may be its actual time or may be its ‘narrative’ time: a point of time selected as the moment to which the virtual ‘temporal perspective’ of the discourse is pegged.)

It is the past tense morphology of these sentences that places the acts of opening prior to $t_c$. Strip that out and it is left indeterminate how the temporal interval throughout which the opening of the door unfolds is to stand to any other salient time. This indeterminacy can be re-introduced at the level of content by allowing that temporal interval to vary independently of the world parameter (to the extent possible). Namely, the content of ‘Fred to open the door’ is the set containing a world-temporal interval pair $\langle w, I \rangle$ just if in $w$, Fred opens the door just throughout $I$, while that of ‘myself to open the door’ contains $\langle w, I \rangle$ just if in $w$, $s_c$ opens the door just throughout $I$.

(Past-tense morphology against $c$ then acts on such a set $S$ by including $w$ just if for some $I < t_c$, $\langle w, I \rangle \in S$; present tense morphology locates $t_c \in I$. Progressive morphology modifies each $\langle w, I \rangle$ pair into $\langle w, I' \rangle$ for $I'$ a non-final subinterval of $I$; retrospective morphology modifies each $\langle w, I \rangle$ pair into $\langle w, I' \rangle$ for $I'$ an interval immediately following $I$. This treatment of the progressive requires a pragmatic approach to the ‘imperfective paradox’; but the orthodoxy to the effect that the lowest verb modifier is a modal is on its face implausible.)

More generally, the content of one’s intention that $\nu \Gamma$ is the set $\{ \langle w, I \rangle : w \nu \Gamma \text{ just throughout } I \}$: when the intention is reflexive, $\nu$ is a self-identifying expression like ‘one’. The content of reflexive intention is in this way neatly bundled together with the content of other-directed intention.

1.1.2 The force of reflexive intention

Doing the same for force requires manoeuvring better left until we have in hand a preliminary story of force applying solely to reflexive intention.

Intention, it is widely thought, carries with it belief: if I intend to open the door at 8:30 or when the guests arrive, I believe...
I will open the door at 8:30 or when the guests arrive—compare Anscombean doctrine (1b). But moreover, if I am intentionally walking to work—carrying out my intention to walk to work, not later or conditionally upon some occurrence, but now and categorically—I believe I am walking to work (1d). And it does not seem to me coherent to assume someone has an unconditional intention for the present to walk to work unless they are intentionally walking to work. So in any circumstance in which one might be said to have an intention to walk to work (perhaps conditionally, perhaps in the future), one believes one is walking to work (if from the point of view of a hypothetical situation or with one’s vantage point moved to the future).

We assume that beliefs determine a set of doxastically possible worlds: \( w \) is among the doxastic possibilities of \( s_c \) at \( t_c \) just if, at \( t_c \), \( s_c \) takes \( w \) seriously as a candidate for actuality—doesn’t believe things aren’t actually as they are in \( w \). We call the set of doxastic possibilities at \( c \) the information state of \( c \), labeling it \( i_c \). Using this apparatus, the view that intention carries with it belief is that if \( c \) has the intention with content \( A \), \( i_c \subseteq \{ w : (\exists I : t_c \in I)((w, I) \in A)\} \)—the information state at a context is a subset of the set of worlds where one is then carrying out the intention.

But how can that be reasonable? An intention is at least something like a ‘desire’: a conative state somehow capturing a value in or preference for one’s carrying the intention out. And wouldn’t basing a belief on such a desire be mere wishful thinking? A legitimate concern. What follows is our attempt to respond to this challenging worry.\(^5\)

Under certain circumstances, if one first Ms and then immediately afterward Ns, one will have just throughout the interval in which one performs these actions thereby \( \Gamma \)-ed. Example: if one is at the northwestern corner of 35th Street and 5th Avenue facing west, if one first (M) walks straight ahead to the next corner, then immediately (N) heads off to the next corner to the right, one will have just throughout the interval thereby (\( \Gamma \)) walked to the southeastern corner of 36th Street and 6th Avenue.

Of course, under those same starting circumstances, there are other ways to get to 36th and 6th: first head north up 5th to 36th, then head west to 6th; take a taxi. And under any other circumstance, performing those two actions in sequence will not get one to 36th and 6th. And even under those same starting circumstances, something unexpected makes it impossible to perform those two actions in sequence: perhaps the police have barricaded 35th at 5th; perhaps one breaks one’s leg halfway up the block to 36th. Nevertheless, under those circumstances, we expect one to be able to perform those two actions in sequence; and if one does, one thereby walks to 36th and 6th.

Let \( M, N \), and \( G \) respectively, be the contents of an intention that one M, that one N, and that one \( \Gamma \) (‘mu, nu, and gamma’); and let \( \langle w, t \rangle \in S \) just if in \( w \), at \( t \) one is at the northwestern corner of 35th Street and 5th Avenue facing west.

Let \( \langle w, (t, t') \rangle \in M + N \) just if for some \( t' \), \( \langle w, (t, t') \rangle \in M \) and \( \langle w, (t', t') \rangle \in N : M + N \), therefore, is the content of an intention to M and then immediately N.

Suppose that \( \langle w, t \rangle \in S \) and for some \( t' \), \( \langle w, (t, t') \rangle \in M + N \); then \( \langle w, (t, t') \rangle \in G \)—after all, any circumstances under which one is at the northwestern corner of 35th and 5th and commences immediately to M and then immediately N, one will have \( \Gamma \)-ed just throughout the interval of one’s successive M-ing and N-ing.

For that reason, if Fred in those starting circumstances wants to know how to get to 36th and 6th, the following would be a good instruction: ‘walk straight ahead to the next corner, then immediately head off to the next corner to the right’. If Fred carries out those instructions, he will in so doing have gotten to 36th and 6th.

\(^5\)Our response is broadly in line with Intention, section 45.
If so, Fred’s intention to get to 36th and 6th gives him a reason to carry out the instructions (1f).

More generally, let $M$, $N$, and $G$ be the contents of intentions that one $M$, $N$, and $\Gamma$; and let $P$ be a proposition. Then

3. ‘$M$, then immediately $N$’ is an instruction for one at $t$ to $\Gamma$ if $P$

$$\Rightarrow \text{for all } w \in P, \text{ if there is some } t' \text{ for which } \langle w, (t, t') \rangle \in M + N, \langle w, (t, t') \rangle \in G$$

4. More generally, where $K \subseteq W \times I$ is the content of the instruction $\iota$, $\iota$ is an instruction for one at $t$ to $\Gamma$ if $P$

$$\Rightarrow \text{for all } w \in P, \text{ if there is some } t' \text{ for which } \langle w, (t, t') \rangle \in K, \langle w, (t, t') \rangle \in G$$

An instruction is always an instruction for a person at a time within a certain region of modal space to perform a certain action.

We assume as a primitive psychological state grasp of an instruction for $s$ at $t$ to $\Gamma$ if $P$. This state is always under a mode of presentation, where the involved modes of presentation are a complex of action predicates (1a). This primitive psychological state may yet be a very familiar one: I see no reason not to identify grasp of an instruction for one at $t$ to $\Gamma$ if $P$ with knowledge how to $\Gamma$ at $t$ if $P$.

Instructions can be compounded in a range of ways: compounding subsidiary actions just by immediate sequentiality, as in our example, should be joined by do-while loops (put one foot in front of the other until you reach the corner); conditionality (one if by land, two if by sea); parallelism (while the cake is baking, prepare the frosting); arbitrary choice (pick a card, any card); and presumably others.

Instructions and intentions have the same kind of content. Indeed, it is plausible that following an instruction is just a kind of intention: a complex intention, but an intention nevertheless. For example, if Fred is following the instruction we gave him, then he has at the outset the intention to first $M$ and then immediately afterward $N$. Initially he has an unconditional intention to $M$ and only a conditional intention to $N$—conditional on his finishing $M$-ing. But when he finishes $M$-ing, he no longer has the intention to $M$: instead, he has the unconditional intention to $N$. Obviously one can only follow an instruction one grasps.

We postulate that:

5. If the intention to $\Gamma$ prevails in $c$, $c$ follows some instruction for $s_c$ at $t_c$ to $\Gamma$ if $i_c$ (1e)

Following an instruction, as we have seen, requires one to serially fulfill unconditional instrumental intentions and then unconditionalize previously conditional instrumental intentions, which must in turn be fulfilled. But (5) requires that fulfilling a subsidiary intention in turn requires following a subsidiary instruction (1g)—and still further grasp of that subsidiary instruction. (So one grasps an instruction involving one’s performing $M$ under certain circumstances only if one grasps an instruction for one to perform $M$ under those circumstances.)

A vicious regress? Actually, a virtuous one. Indeed, not even a regress, but rather a recursion. ‘Regresses’ are for ‘analyses’ or ‘reductions’—our aim is neither of these, but rather to shed light

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6 If grasp of an instruction for $\Gamma$-ing is knowledge how to $\Gamma$, then the nonpropositional content of an intention means knowhow is nonpropositional—contra ‘intellectualism’ (Stanley and Williamson 2001). Alternatively, if knowledge how to $\Gamma$ is knowledge that by carrying out the instruction under appropriate circumstances, one will $\Gamma$, the necessary truth of any such knowledge means that, even if knowhow is propositional, it is not descriptive—so that what is important about knowhow is overlooked by intellectualism.

7 Thompson (2008, 3.1) advances an alternative neo-Anscombean case for the indefinite divisibility of action.
on the structure of intention. If intention is ‘gunky’—if carrying out an intention requires carrying out a subsidiary intention—that is worthy of note.\(^7\)

Indeed, it provides our explanation of how intention carries belief. For (5) is an a priori truth of rational psychology. It says that if one intends to \(\Gamma\), one follows some instruction for doing so in one’s situation given one’s beliefs. (4), our characterization of what it is for an instruction to be ‘for’ something, says that if an instruction for \(\Gamma\)-ing when \(P\) is being followed, one will succeed in \(\Gamma\)-ing when \(P\). One might fail if one’s beliefs are mistaken—but the prospect that one’s beliefs are mistaken is not a reason to abandon them.

Even still, what could possibly link the entire hierarchy to actual real-world behavior? Why couldn’t one have a full array of intentions while actually carrying out none of them? It is here that the ‘gunky’ or ‘bottomless’ character of intention enters the picture. At some level of resolution, one’s highly subsidiary intentions begin to establish a rough contour for how one will move one’s body. At a finer level of resolution, intentions subsidiary to these establish a still finer contour. And so forth—down to a level of precision sharper than we can make articulate, one so sharp that the ‘binary’ phenomenon of intention becomes indiscriminable from the ‘continuous’ phenomenon of bodily movement.

And intention-based beliefs at this exceedingly sharp level of resolution, arguably, can’t be wrong (1b). For at some point, we reach a state indiscriminable from perception: this is the lesson of the theorists of the ‘sensorimotor complex’, that below a certain threshold of precision the feedback between sensing and moving binds them so tightly that it is no longer of theoretical value to parcel an ecological interaction into the environment’s contribution and the animal’s contribution (Thompson 2004). And in perception, in turn, we find the given: a psychological state immune to error. The given is in need of interpretation, but misinterpretation of the given embroils one in incoherence. One’s own incoherence is not, in the moment, coherently conceivable, and cannot be detected (until after the fact) (Hellie 2011). So intention-based beliefs at the exceedingly sharp level at which fine-contour body movements are performed cannot be detected from within to be mistaken. And this certainty at the ground level filters upward, permeating the web of more abstract intentions governing it.

So one has an intention to \(\Gamma\) just if one believes one does. That requires one to follow an instruction for \(\Gamma\)-ing. Instructions cannot themselves introduce error, though they might be followed under the wrong circumstances. So subject to the prospect of mistake in the assumptions behind the instructions one follows for \(\Gamma\)-ing—a prospect which, in the limit of precision, approaches unintelligibility—one has an intention to \(\Gamma\) just if one is \(\Gamma\)-ing.

Intention carries with it belief not as a kind of wishful thinking, then, but rather because intention is what makes its object happen. It makes it happen by establishing a web of contextually appropriate subsidiary means down to a level of indefinitely high precision. At that level, direct realism ensures a mesh between what is wished for and how things are. As the saying goes, ‘practical knowledge is the cause of what it understands’ (Anscombe 1963, 48, citing Aquinas).

Why ‘should’ practical rationality be gunky in this way? A question in ‘ideal mind design’, of course—but one of potential pedagogical weight nonetheless. We could think of the problem the system resolves as that of linking ‘on-off’ rational psychology with the ‘continuous’ character the ecological animal-environment relationship. Elemental rational-psychological states are limited to drawing a simple-minded cut through a space of options: cut because what content does is make distinctions; simple-minded to avoid excessive demands on learning and processing. The indefinite fineness of grain of the continuous feedback between animal

\(^7\)
and environment implementing skilled action—managing emotions in a fraught committee meeting; avoiding trees in a dirt-bike slalom; performing exquisitely in a jazz combo—the full repertoire of options in one’s quiver quickly overflows any basket of simple-minded cuts. But a hierarchy of such cuts arrayed together in a downward branching structure, perhaps, has what it takes to engender the full array of minutely varying options the expert requires.

In general, one will know many different ways to accomplish pretty much anything: one can get to 36th and 6th by going clockwise, as imagined, but also by going counterclockwise—or by taking any number of scenic routes. One needs to choose. How? In schematic terms:

6. If the intention to $\Gamma$ prevails in $c$, $c$ follows an optimal instruction for $s_c$ at $t_c$ to $\Gamma$ if $i_c$

What does one attempt to optimize? If it is the governing action which rationalizes the implementing actions rather than some other value, the natural assumption is that one optimizes by the standards of the governing action itself: one’s choice of route is to optimize the best trip to 36th and 6th as such, or by the internal standards of the action set by what it is to get to 36th and 6th well. Or practical rationalization is transitive: perhaps the choice of route is motivated not just by one’s intention to get to 36th and 6th but by whatever motivates that, and whatever motivates that, and so forth—for example, somewhere one is performing the action of weekending in New York City—so that the choice of means must somehow optimize not just by what makes for a good walk to 36th and 6th but also by what makes for a good weekend in New York City.

What is it to optimize in those terms? Given the possibilities one takes seriously and the instructions for $\Gamma$-ing under those circumstances in one’s situation, one should presumably choose the course that is best (by the standards of $\Gamma$-ing, given one’s situation) in the aggregate over the possibilities one takes seriously. About this much, decision theory seems to be correct. What exactly it is to aggregate in this way is a matter we leave open. The menu of options is familiar: minimax, maximax, expected value given some method of weighting worlds or cells of a partition (rank or probability)—we somehow exploit some range of these in optimizing under uncertainty.

### 1.2 Intention and propositional attitudes

If Fred has posted the letter I gave him, then either he has posted the letter or he has burned the letter. After all, if not, then neither has he posted the letter nor has he burned the letter—which is incompatible with his having posted the letter. A disjunction is entailed by its disjunct. It does not matter if the disjunction is sentential or predicative: for Fred has either posted or burned the letter just if either Fred has posted the letter or Fred has burned the letter.

If I believe that Fred has posted the letter I gave him, then I believe that either he has posted the letter or he has burned the letter. After all, if I believe Fred has posted the letter, I do not disbelieve that either he has posted the letter or he has burned the letter: for to do so, I would have to believe that neither has he he posted the letter nor has he burned the letter; and believing that is incompatible with believing that he has posted the letter. And nor do I suspend judgement whether (either he has posted the letter or he has burned the letter): for to do so would be to at least leave disbelief open as an option; but as we have just seen, disbelief is incompatible with my belief that Fred has posted the letter. Disbelief, suspension of judgement, and belief exhaust my options regarding the disjunction; so I believe it. Belief in a disjunction is a requirement of belief in its disjunct. It does not matter if the
disjunction is sentential or predicative: for I believe that Fred has either posted or burned the letter just if I believe that either Fred has posted the letter or Fred has burned the letter.

A source of skepticism is the conflation of the claim that Fred has posted or burned the letter with the claim that Fred has intentionally posted or burned the letter. Those should be distinguished. After all, action is ‘intentional under a mode of presentation’ (1a): if in walking around the block, Fred trod on an ant, then during the period of Fred’s walk, he walked around the block and trod on an ant. But even if Fred intentionally walked around the block, he need not have intentionally (walked around the block and trod on an ant): for that would apparently require that Fred intentionally trod on an ant; but that may well have been accidental. So if Fred has intentionally posted the letter, then while it follows that either Fred has intentionally posted the letter or Fred has intentionally burned the letter, it may yet not follow that Fred has intentionally (either posted or burned the letter). And if I believe that Fred has intentionally posted the letter, then while it follows that I believe that either Fred has intentionally posted the letter or Fred has intentionally burned the letter, it may yet not follow that I believe that Fred has intentionally (either posted or burned the letter). (The case exhibits the following parallel to Hesperus/Phosphorus: because Hesperus is Phosphorus, if Hesperus is a planet, it follows that Phosphorus is a planet; but if Fred believes that Hesperus is a planet, it does not follow that Fred believes that Phosphorus is a planet; nor if I believe Fred believes Hesperus is a planet does it follow that I believe Fred believes Phosphorus is a planet.)

If action is intentional under a mode of presentation, this is presumably because intention is under a mode of presentation: after all, intentionally Γ-ing would seem to just be carrying out an intention to Γ. Intention does indeed appear to be under a mode of presentation. For if Fred has an intention to walk around the block, then even if this involves walking 474 m, Fred need not have an intention to walk 474 m—or, even more clearly, if Fred has an intention to catch the evening’s first glimpse of Hesperus, he need not have an intention to catch the evening’s first glimpse of Phosphorus.

Still, the modes of presentation involved in intention at least arguably differ from those involved in belief. If I believe that Fred has posted the letter I gave him, then I believe that either he has posted the letter or he has burned the letter. But it is not so that if I intend to post the letter, I intend to either post or burn the letter. Nor for that matter is it so that if I intend to either post or burn the letter, I intend to post the letter—after all, I might intend to burn the letter. While belief is upward-entailing and disbelief is downward-entailing—belief that ϕ entails belief that ψ whenever ψ is weaker, denial that ψ entails denial that ϕ whenever ϕ is stronger—intention seems to be neither upward- nor downward-entailing.

Why? The answer lies in the force of intention. By (6), an intention to Γ requires one to intend an instruction ι optimal by the standards of the Γ-mode of presentation, where, given one’s beliefs, the content of ι is stronger than the content of Γ. If intention were upward-entailing, intention to Γ would compel intention to Γ− for any weaker Γ−—and therefore, by (6), to intend an instruction ι− optimal by the standards of the Γ− mode of presentation. It is straightforward to envisage cases where Γ and ι− would be incompatible: an intention to take out the trash would entail an intention to take out the trash or restrain oneself from taking out the trash—even where the more convenient means is restraint; an intention to polish one’s shoes would entail an intention to do something with one’s shoes—even where the best thing to do with one’s shoes is give them to the poor; an intention to pour a relaxing beer after work would entail an intention to do something or other—even where the best way to do something or other at all is to abandon ordinary life for sacrificial devotion to feeding the
poor. Conversely, if intention were downward-entailing, an intention to take out the trash would entail an intention to take out the trash and then jump off the roof; and so on.

Rather, it is neither: the role of an individual intention is neither to bound how things may be nor to bound how things must be. The individual intention is empowered only as a node in a downward-branching tree of intentions (1f). While what is incompatible with the content of the individual intention is forbidden, compatibility does not yet establish either obligation or permissibility. What is both permissible and obligatory at \( t \), by the lights of \( t \), is what is compatible with the full downward chain of intentions at \( t \) as they apply to \( t \). For \( t' > t \), compatibility with the full downward chain of intentions at \( t \) as they apply to \( t' \) establishes neither permissibility nor obligation at \( t' \), by the lights of \( t \), but only not as yet foreclosed candidacy for permissibility/obligatoriness.

The orthodoxy offers a very different conception of the conative side of psychology, limiting the conative to one’s delimitation of a ‘sphere of permissibility’ in modal space (Lewis 1979a). An alleged propositional attitude of ‘desire’ has the sphere of permissibility as its content: one desires that \( \varphi \) just if the sphere of permissibility is a subset of the content of \( \varphi \), making desire upward-entailing. The force of desire is to impose an obligation on one to somehow ‘see to it that’ the actual world inhabits the sphere of permissibility.

Nothing in this apparatus establishes any essential link between the conative and action: in that sense, the apparatus is broadly ‘consequentialist’, if perhaps only on a subjectivist conception of this view. Perhaps a world is in the sphere of permissibility just if everyone possesses a week’s supply of chewing gum. If so, there would be no rational guidance of how one would go about seeing to it that everyone possesses a week’s supply of chewing gum. One’s choice of means would be entirely arational: from the point of view of rationalizing explanation, the means would be effectively ‘ballistic’.

If one is seeing to it that \( \varphi \), one is thereby also seeing to it that \( \varphi \lor \psi \). Similarly, if one is M-ing, one is thereby also (M \lor N)-ing. But if one is M-ing intentionally, one is not thereby also (M \lor N)-ing intentionally. That is because of the force of intention: an intention to M compels one to follow the optimal instruction for M-ing; an intention to (M \lor N) compels one to follow the optimal instruction for (M \lor N)-ing; and following the former is, as we have seen, often incompatible with following the latter. Desire that \( \varphi \) is means-indifferent where intention to M is means-concerned: that is the source of the asymmetry in upward-entailment between desire and entailment.

Fattening up the force of desire to make it means-concerned might break this asymmetry. For example, adding an obligation that the seeing to it is maximally (or sufficiently) efficient, say, might narrow down which means are rationally acceptable. And the most efficient means to see to it that \( \varphi \lor \psi \) would typically be more efficient than the most efficient means to see to it that \( \varphi \): for this reason, one’s obligations under desire that \( \varphi \) might clash with one’s obligations under desire that \( \varphi \lor \psi \).

Still, once means-concern has been introduced to the conative side of psychology, we face the question of how best to accomplish this: of what exactly the form of means-concern is. And here our approach seems hard to resist. For a theory limited to the bare requirement of maximal efficiency in seeing to it that all propositional desires are true is not especially plausible. The choice of means remains largely ballistic, sensitive only to potential divergence from a surface of optimal efficiency. This makes a mystery of the crucial role in rational agency of nested rolling instructions; finds no role for reiteration of action types; and remains silent on the obviously relevant phenomenon of expression of intention. Nor is it at all plausible that anything other than the maximally efficient known means is a rational requirement; and I
am not familiar with any explanation of what it is to know a means in competition with our theory.

Our complaint against the orthodoxy is not that there is no role for its apparatus. Perhaps the requirement to see to it that the actual world is in the sphere of permissibility is some ‘top level’ rational requirement, implemented by our grasp of some highly general instruction for doing so—namely, to perform whatever actions are best for doing so. But the role of a top-level rational requirement may be filled otherwise: perhaps it is to live well, by the standards one has found oneself with; where this is in turn implemented by one’s following instructions for doing so. This approach certainly makes room for a greater degree of nuance than the bare apparatus of a sphere of permissibility: living well is by certain standards and comes in degrees. This approach also resolves an overgeneration worry for the sphere of permissibility account. Perhaps we doubt that there could be any rational merit in having as a top-level goal seeing to it that everyone has a week’s worth of chewing gum; perhaps we suspect that there is a (perhaps defeasible) top-level rational imperative to eat enough to stay alive. Without further epicycles, spheres of permissibility need neither exclude the former nor include the latter. By contrast, our conception of what it is to live well may turn out to have sufficient grain to exclude the former and include the latter. Here of course the apparatus of spheres of permissibility may yet turn out to serve some important auxiliary purpose—still, no such purpose is assigned them in the remainder of this chapter.

2 Intention and imperatives

2.1 Mindset semantics

Perhaps in conversation, Sam and Fred establish a collective agent. The mental state—mindset—of the collective agent is established by social facts prior to the onset of the conversation and guided by the course of the conversation. This evolution of the collective mindset draws on, and in turn feeds back into, the mindsets of Sam and Fred.

This hypothesis is a picturesque articulation of a broadly Stalnakean conception of discourse pragmatics (Stalnaker 1970). On that conception, in a conversation between Sam and Fred, the common ground—those beliefs commonly shared between them (known by each . . . to be known by each to be believed by each)—plays a crucial role in controlling the evolution of discourse, and arguably even fixing the semantic properties of context-dependent expressions. Those for whom it is part of the common ground that Kennedy was shot, unlike those others, will accept the conditional ‘if Oswald didn’t shoot Kennedy, someone else did’; those who for whom it is part of the common ground that Mo has a sister, unlike those others, will accept the claim ‘Mo’s sister is in town’.

The picture can be expressed in standard formalism by appeal to a number of contexts associated with a stage in a conversation, one for each participant and one for the collective, where the context assigned to a participant represents her mindset and the context assigned to the collective represents the collective mindset (Lewis 1979b, Stalnaker 1998). A given stage of conversation between Sam and Fred, for example, would be assigned Sam’s context $c^s$, Fred’s context $c^f$, and a collective context $c^∗$. Following Stalnaker, Veltman (1996), and others, a context $c$ involves an information state $i_c \subseteq W$. Assertion of a declarative sentence is understood as a proposal to update the collective context to bring its information state more closely into alignment with the individual context of the speaker; this in turn requires updates in the information states of the members of the audience.

Suppose that the semantic value of the declarative sentence $\varphi$ against the context $c$ is the proposition $[\varphi]^c$. Suppose that a context supports, or implicitly accepts, $\varphi$ just if it has all the infor-
mation the sentence encodes against it: $c \models \varphi$ just if $i_c \subseteq \llbracket \varphi \rrbracket^c$. Support by a context contrasts with truth at a context ($c \models \varphi; w_c \subseteq \llbracket \varphi \rrbracket^c$) by being a relation of subset rather than of membership. That leads to a critical contrast. Truth is ‘self-dual’: untruth of the negation is truth. But support is not: lack of support for the negation might just be—uncertainty. As we will shortly see, this leads to operators with behavior strikingly unlike those available on truth-centered approaches.

On the dynamic side, let $c + \sigma$ be the context resulting from updating $c$ by accepting into it a canonical speech act performed with $\sigma$—assertion, for declarative sentences; asking, for interrogative sentences; command, for imperative sentences. According to Stalnaker, the ‘essential effect’ of assertion is incorporation of the information encoded in the sentence asserted into the common ground: $i_{c+\varphi} = i_c \cap \llbracket \varphi \rrbracket^c$. This puts assertion ‘in harmony’ with support: $c^* \models \varphi$ just if $c^* + \varphi = c^*$.

Individuals undergo certain obligations in respect to the collective. One should not assert a sentence one does not believe: if $c$ asserts $\varphi$, $c \models \varphi$. And one should believe what is part of the common ground: when individual $c^i$ is party to conversation $c^*$, $i_{c^i} \subseteq i_{c^*}$. On this model, if Sam asserts $\varphi$ and it is accepted into the collective, then (where $c'$ is $c$ updated as a result of this transaction) $i_{c'} = i_c \subseteq \llbracket \varphi \rrbracket^c$ and $i_{c'} \subseteq i_{c^*} \subseteq \llbracket \varphi \rrbracket^c$—so that Sam and Fred thereby come both to accept $\varphi$ (interpreted as asserted).

The characteristic doctrine of mindset semantics is that this pragmatic apparatus is not just an adjunct to an isolated semantic basis, but is inseparable from semantics itself. The central semantic notion, entailment, is defined in terms of the central pragmatic notion, support: $\sigma \vdash \tau$ just if whenever $c \models \sigma, c \models \tau$—entailment is support-preservation. Departing from Stalnaker (1975, appendix), mindset semantics denies the viability of a language-independent notion of entailment; rather, the only notion of entailment is akin to Stalnaker’s language-dependent ‘reasonable inference’. While for declarative sentences failing to exhibit a certain sort of context-dependence, support-preservation and truth-preservation coalesce, support-preservation permits a wider range of entailments.

A central and familiar such application is the Veltman rigidifier (Veltman 1996). Let $\llbracket \varphi \rrbracket^c = \{w : c \models \varphi\}$. $\llbracket \varphi \rrbracket^c$ is always extremal: in that way it is unlike an ordinary descriptive sentence, which encodes information about which one can be uncertain. But $\llbracket \varphi \rrbracket^c$ is context-dependent: in that way it is unlike an ordinary a priori sentence, which is either universally acceptable or universally rejectable.

The logical behavior of $\varphi$ tracks the non-self-duality of $\models$. $\varphi \models \varphi$, but $\neg \varphi \not\models \varphi$ and $\varphi \not\models \varphi \lor \psi$ and $\neg (\varphi \lor \psi) \not\models \varphi \lor \neg \psi$. By contrast, the self-duality of $\models$ makes $A$ also self-dual—with correspondingly humdrum logical behaviors.

This pattern of entailments recapitulates ‘Moore’s paradox’ regarding belief: $\varphi$ and ‘I believe that $\varphi$’ are equivalent (accepting either compels accepting the other), but while accepting $\neg \varphi$ requires accepting ‘I don’t believe that $\varphi$’, the converse does not hold (Veltman 1996, Yalcin 2007); and while accepting ‘either I

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8Dilemma: if ‘certainly, $\varphi$’ is evaluated against $c^i$, we automatically grant all speaker-presuppositions; if ‘I am hungry’ is evaluated against $c^i$, none can be acknowledged as hungry unless all are. Solution: semantically, personal pronouns are just demonstratives like ‘that’; ‘I’ calls attention to the speaker merely through conventional discourse-pragmatic effects. This brings ‘I’ more in line with the contrast between ‘he’ and ‘she’, ‘he’ and ‘him’: gender and case clearly have distinctive conventional meaning solely in discourse-pragmatics; why should person and number be any different?

9Yalcin 2007 and others have classified this operator as a modal. A closer analogue is to the classical rigidifying operator $A$ (Kaplan 1977/1989), where $\llbracket A \varphi \rrbracket^c = \{w : c \models \varphi\}$, where $c \models \varphi$ just if $w_c \in \llbracket \varphi \rrbracket^c$—just if $\varphi$ is ‘true at’ $c$. As we will argue, natural language modals are more like the ‘diagonal’ classical modals.

10Because support, unlike truth, is not self-dual, the Veltman rigidifier, unlike $A$, has a nontrivial dual operator: $\llbracket \Delta \varphi \rrbracket^c = \{w : c \models \neg \varphi\}$. This is the operator investigated by Yalcin and (in a dynamized version) by Veltman as epistemic ‘might’.
believe that ϕ or I believe that ψ’ requires accepting ‘I believe that either ϕ or ψ’, the converse does not hold.

This all suggests that ∨ϕ is semantically akin to the belief-avowal ‘I believe that ϕ’. If so, the belief-avowal is neither descriptive nor a priori: rather, it expresses one’s belief.11

2.2 Mindset semantics for practical language

Our objective is to extend this approach from assertions using declarative sentences to commands using imperative sentences. First, we need a theory of content for imperative sentences. Our hypothesis is that they are the contents of intentions: the imperative ‘νΓ’ has as its content the set containing ⟨w, I⟩ just if in w, νΓ’s just throughout I. More formally, \[[νΓ] \subseteq W \times I.\]

Why believe it? An imperative sentence, like the complement of an expression of intention, is a tenseless clause.12 If I intend to take out the trash, that is significantly akin to accepting a self-command ‘take out the trash’; if I intend Fred to take out the trash and intend Brent to wash the windows, I can realize these intentions by issuing the command ‘hey you pair, Fred take out the trash and Brent wash the windows’: if each accepts the command I have given, Fred has the intention to take out the trash and Brent has the intention to wash the windows.

According to the orthodoxy (Lewis 1979a), an imperative has the logical form of a modally prefixed declarative sentence \(!ϕ\). But an imperative, unlike a declarative, is tenseless and closely associated with intention—facts readily accommodated on our proposal but not on the orthodoxy. Moreover, typically, when there is a modal, there is its dual.13 The orthodoxy accommodates this by postulating a permissive modal dual to the mandating modal in !ϕ and represented \(iϕ\). But the orthodoxy must then somehow accommodate the fact that no known natural language has a permissive mood dual to the imperative mood; on our approach, no modal is involved, so there is no expectation that there should be a dual modal involving a permissive mood.

With our theory of content for imperatives in hand, we require second a pragmatics of command. In parallel to the pragmatics for assertion, we think of interpersonal command as involving a collective agent constituted by, governed by and governing, and recapitulating in structure the mindsets of the individual parties to the conversation. In the case of assertion, the common ground recapitulates the individual-psychological phenomenon of belief, represented as a proposition. In the case of command, the individual-psychological phenomenon with which we begin is intention—better, the body of intention, the full tree of individual intentions implementing a single topmost intention in accord with knowhow and evolving self-locating belief.

We represent a body of intention following Portner’s (2004) notion of a to-do list (itself a variety of ‘conversational score’: Lewis 1979b): in effect, a set of intention-contents. As a body of intention is an aspect of one’s mindset, a to-do list \(d_Γ\) is a component of a context \(c\): Fred’s to-do list \(d_Γ\) is therefore a component of his total context \(c_Γ\) alongside his information state \(i_Γ\). Fred has the intention to \(Γ\) just if (suppressing context-dependence) the content \(G = [[[I myself Γ]]\) is on Fred’s to-do list: just if \(G \in d_Γ\). A body of intention is subject to the praxeological constraints character-
ized in the opening section of this chapter. These are only loosely intrinsic to the phenomenon of intention, requiring for significant restriction the involvement of belief and knowhow. We may assume similar global restrictions on total contexts: \( c \) is a possible context just if \( i_c, t_c, d_c \), and whatever component of context represents knowhow, fall under constraints appropriately isomorphic to our praxeological constraints on psychology. Similarly, \( c \) supports ‘I myself \( \Gamma \)’ just if \( \llbracket \text{I myself} \ \Gamma \rrbracket \in d_c \).

Imperative entailment is not a novel variety of entailment—it is simply support-preservation yet again. Imperative support is characterized in terms of implicit requirement of intention: \( c \models \nu \Gamma \) just if \( \llbracket \nu \Gamma \rrbracket \in d_c \). So \( \nu \Gamma \vdash \mu \Pi \) just if whenever \( \llbracket \nu \Gamma \rrbracket \in d_c \), \( \llbracket \mu \Pi \rrbracket \in d_c \).

We can extrapolate the Veltman rigidifier to an analogous operator for the expression of intention (1c). Let \( \llbracket \text{I intend} \ \nu \text{to} \ \Gamma \rrbracket \in d_c \) \( \{w : \llbracket \nu \Gamma \rrbracket \in d_c\} \) ‘I intend Fred to take out the trash’ in effect tests the context for the presence of \( \text{Fred take out the trash} \) on its to-do list, having the trivial proposition as semantic value when the test is passed, the vacuous proposition when failed. Because for no context is \( i_c = \emptyset \), it follows that \( c \) supports ‘I intend Fred to take out the trash’ just if \( \text{Fred take out the trash} \) is on \( d_c \) just if \( c \) supports ‘Fred take out the trash’, and supports ‘I do not intend Fred to take out the trash’ otherwise. Accordingly, ‘I intend Fred to take out the trash’ and ‘Fred take out the trash’ are supported at exactly the same contexts—which is to say they entail one another. Intuitively they do: one who has that intention should give the command; one should not give the command unless one has the intention (compare Anscombe 1963, page 82). Again, ‘I don’t intend Fred to take out the trash’ is entailed by but does not entail ‘Fred don’t take out the trash’, while ‘either I intend Fred to take out the trash or I intend Fred to wash the windows’ is not entailed by ‘Fred take out the trash or wash the windows’ (the converse nonentailment is Ross’s paradox).

The ability of mindset semantics to provide not just a univocal treatment of intradeclarative and intraimperative entailment relations, but even entailment relations between declarative and imperative sentences, and also to bring under a single umbrella a range of Moorean phenomena, is (to my mind) a significant motivation for reassigning the name ‘entailment’ from truth-preservation to support-preservation. The former is simply too limited in its scope and power to do the job of entailment: namely, to serve as the most general constraining structure of linguistic meaning.

3 Imperatives and incorporation

The formal approach just canvased may be effective for representing individual mindsets and solipsistic practical language. But command is a social phenomenon; and the attempt to recapitulate individual practical psychology for a collective structure that will explain the pragmatics of command confronts a puzzle at the outset. For it can seem that an assemblage of individual practical psychological states cannot suffice for any practical rationality in the issuance and obeying of commands.

If Fred intends to walk to 36th and 6th, and his best instruction for doing so is to walk straight to the corner and then head right up to the next corner, then until Fred has walked to the first corner, he intends to do so. He is, moreover, practically rational in having this intention: by contrast, an intention to turn around and walk the other way would not, prima facie, be practically rational. And what makes Fred practically rational in having the former but not the latter is his intention to walk to 36th and 6th.\(^{14}\) The governing

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\(^{14}\)What makes that intention practically rational? Presumably its somehow being involved in whatever at present best implements the top-level sources of practical reason. Those must be themselves rationalizing but unrationizable. Perhaps Fred’s inhabiting a certain form of life—a condition in which he simply finds himself—could fit that bill.
intention does so by itself: knowhow and belief are not sources of practical reasons, but only channel the practical rationalizing force of intention into a specific form.

Fred’s intention to walk to 36th and 6th, by contrast, has absolutely no binding force on anyone else: it does not, by itself, provide Sam with a practical reason to have any particular intention at all. Perhaps Sam is bound by a general and defeasible requirement of noninterference with each person’s actions; perhaps she is bound by a general and defeasible requirement to contribute to a society supportive of each person’s actions. In the vast majority of cases, whatever Fred intends will be a matter of no significance at all to Sam. If Sam’s achieving some intention is somehow incompatible with Fred’s achieving his intention to walk to 36th and 6th, she might well have practical reason to interfere with Fred’s carrying the intention out; if it is somehow very important to Sam that Fred achieves the intention, she might well have practical reason to aid him. Still, even in these cases, it is not Fred’s intention by itself that provides Sam with a practical reason: rather, it does so only with the assistance of a highly general moral goal, or with the assistance of a highly specific personal intention of her own.

If practical rationality is agent-internal in this way, it is a puzzle how a command can have any practical motive force. This has been noted in the literature. It would be absurd for me to command the Pope to take out the trash: after all, any intention I may have to which the Pope’s taking out the trash might contribute is one that is utterly non-binding on the Pope (Ninan 2005). But why then would it not be equally absurd for me to command Fred to take out the trash? If practical rationality is agent-internal, then no intention of mine could have any practical motive force for Fred. Manifesting my intention for Fred to take out the trash by commanding ‘Fred take out the trash’ would be a sign of eccentricity, rather like announcing ‘$2 + 2 = 5$’.15 Were Fred to believe my intention backed up by, say, violence, he might have a self-interested practical reason to obey the command. But that is evidently very far from the ordinary case: most commands are passed back and forth reciprocally; there is typically a great deal of room for haggling over whether a given command is the right one; society is not bound cooperatively by mutual fear of violence; commands backed up by violence are obeyed sullenly, stupidly (Collins 1975), in a manner very unlike the creative and enthusiastic manner in which we follow commands issued in ordinary more-or-less cooperative social practice.16

And it is impossible for me to manifest Fred’s intention by commanding ‘Fred take out the trash’—or if it is, it would be pointless, because Fred would already have the intention. So it can seem as if either there could be no rationality to Fred’s obeying my command or there could be none to my issuing the command.

The puzzle arises only if we think that my commanding ‘Fred take out the trash’ manifests individual intention. And fortunately, the Stalnakean apparatus does not limit us to that. For when Fred and I are in conversation, we find three agents rather than just two: we find me, we find Fred, and we find the collective agent of our conversation.

Our hypothesis, then, is that my commanding ‘Fred take out the trash’ manifests our collective intention. It is not I who intends that Fred take out the trash, but we, a collective agent of which both Fred and I are parts, who intend that Fred take out the trash. Fred voluntarily ‘incorporates’ with me in getting into a conversation; when he does so, he submits to the collective will, committing to

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15 Portner (2007, example 18) claims that having been commanded to take out the trash can be a reason to take out the trash. But how? The bare fact that someone is hollering imperative sentences in my direction is a source of annoyance, not practical motivation. If the hollering is a (legitimate) command, then if this makes a difference, what is command such that a difference is made?

16 David Lewis’s (1979a) example of a master ordering a slave to carry rocks all day, while extremely funny, is therefore regrettably unrepresentative.
carrying out the collective agent’s intentions for him. Conversely, the absurdity of my giving a command to the Pope is rooted in my not having incorporated with the Pope.

That is to say, alongside the common ground represented by an information state, the collective agent of the conversation has a common project represented by a to-do list. We hypothesize that this to-do list is, together with collective-locating belief and collective knowhow, subject to the same global coherence constraints as apply in the case of individual psychology. It remains then to explicate the relations between individual and collective practical psychology, and how these pertain to the issuance and acceptance of commands. We describe the elements of the story piecemeal, in roughly increasing order of sophistication.

An initial and straightforward element concerns the acceptance of commands, and reiterates our resolution of the puzzle. If the collective agent has on its to-do list Fred’s taking out the trash, then Fred is incorporated into the collective agent; and, moreover, Fred has on his to-do list his taking out the trash. More formally, when $c^f$ is incorporated into $c^*$, then where $G$ represents the agent of $c^f$ $\Gamma$-ing and is the content of $[[\text{Fred } \Gamma]]$, then if $G \in d_{c^*}$, $G \in d_{c^f}$; and, moreover, $c \models \text{Fred } \Gamma$ just if $G \in d_c$.

But how does an intention that Fred take out the trash get on the collective agent’s to-do list? Presumably that is related somehow to my issuance of the command ‘Fred take out the trash’, but how? And what are the circumstances in which I am reasonable in issuing that command?

We can distinguish two ways of thinking about these questions. On one, my issuance of the command creates the collective intention. On the other, my issuance of the command manifests the collective intention.

To see the contrast, it is helpful to consider the analogous contrast for ways of thinking about assertion. What is the common ground? Is it that region of our pre-existing common knowledge which has been made explicit as such? The former is an ‘internalist’ way of thinking about the common ground: there are no facts of the matter about what is in the common ground beyond that which we have hitherto introduced into it; what is apparent about the common ground is all there is to say about it. The latter is more ‘externalist’ in spirit: the implicit common ground is that which we do in fact agree upon; but in order for the implicit common ground to be useful, we need often need to make explicit what is really in it.

I find the externalist approach somewhat more alluring. We think of it as illegitimate to attempt to introduce $\varphi$ into the common ground unless one believes that $\varphi$; and we think of it as illegitimate to permit its introduction while refraining from belief. But why? Is this a mere convenience, easily transmuted or disrupted? The internalist picture offers no deeper answer; the externalist, by contrast, in thinking of conversation as an attempt to reveal the common ground, finds what might be a more stable explanation of these norms.

Analogously, the internalist about the common project thinks of command as creating the common project, while the externalist thinks of command as manifesting it. According to the internalist, the common project is in effect an instrument one can use to steer the activities of others while also subjecting oneself to the prospect of being steered: pending the explicit introduction of purposes for it, it could be anything at all. According to the externalist, by contrast, the common project has a predefined objective for which it comes into existence: an objective which may evolve, and which may be a matter for some negotiation or discovery, but which serves as an initial regulative constraint on what may be legitimately commanded.

Here too we seem to think of collective activity in line with externalism. To see this, return to the case of issuing commands to the Pope. It is absurd for me to do so, because the Pope and I
are in no way incorporated. The parish priest is, by contrast, incorporated with the Pope—at least in that both are members of the Catholic Church. It is by no means absurd, for this reason, for the Pope to issue commands to the parish priest. Is it absurd for the parish priest to issue commands to the Pope? The phenomenon of absurdity here is complex. If the parish priest is merely shouting the command across a thronging square, the relevant sort of conversational incorporation would be absent, resulting in absurdity. If the parish priest is granted an audience with the Pope, whether issuing a command would be absurd can depend on what the command is: a command to take out the parish trash would be at the very least importunate, inasmuch as there is quite clearly no collective intention each would recognize that would be best implemented by the Pope taking out the parish trash; but a command (phrased, presumably, as a beseechment) to, say, devote more attention to justice and less to birth control might seem bold and might be rejected but would not so clearly be out of line with their collective purpose.

This collective purpose is one the parish priest is not expected to know all the ins and outs of: if he is commanded to change the liturgy in a certain way, his is not to wonder why; and yet he remains confident that the change is not mere arbitrary exercise of authoritative whim. The Pope, presumably, sees things this way as well: his sense of the purpose of the Catholic Church is presumably incompatible with whimsically ordering the parish priest to play the saxophone on the pulpit. Internalists might reply that the Pope is restrained here only by fear of open revolt; but perhaps the Pope is not so explicitly cynical. The internalist might reply that if not, the Pope has convinced himself of the existence of a purely illusory institutional constraint; but that would make internalism into an error theory.

We engaged in speculation about the top-level source of individual practical rationality earlier (page 14). Whatever the answer there is, we may suppose that incorporative engagement of a sort legitimating issuance and acceptance of commands brings with it some top-level purpose—again, one that may be less than fully clear to the participants, and may evolve. The top-level source of individual practical rationality surely constrains high-level intentions in some way or other. How, we need not decide; but however that is, we may reasonably postulate that the top-level source of collective practical rationality constrains collective intentions in a similar manner. The issuance of commands, then, can be viewed as a sort of ‘applied practical mathematics’: the commander attempts to make explicit to the audience what is required by their common purpose.

The requirement is implicit in the common purpose; so why doesn’t the audience already know it? Any or all of the following: the authority has a more nuanced grasp of the nature of the common purpose; the authority knows more about how best to carry out the collective will; the authority explicitly possesses information that is part of the implicit common ground but not the explicit common ground; the audience is one of several members collectively in a ‘Buridan’s ass’ situation regarding who will do what, and requires some individual to delegate tasks; the tasks under performance by the several members of the audience are interwoven in a way making collective pacing important, and limitations on attention require a more general observer to set the pace.

Let us return to our questions about the issuance of commands. First, how does an intention that Fred take out the trash get on the collective agent’s to-do list? Answer: in light of the implicit common ground and implicit common purpose, (and, presumably, implicit distributed knowhow), some higher intention in service of that implicit common purpose is best implemented by the collective through Fred taking out the trash. Second, how does that intention relate to my issuance of the command ‘Fred take out the trash’? Answer: the collective intention rationalizes the issuance
of the command, rather than being created by it. Third, what are the circumstances in which I am reasonable in issuing the command? Answer: just as Fred’s membership in the collective commits him to carrying out its intentions as they regard him, so to does anyone’s membership in the collective commit them to ensuring that its intentions are carried out by those whom they regard. (When institutions become very complex, this coordinative responsibility is itself distributed.) I have somehow managed to compute out that the common purpose intends that Fred take out the trash, and notice that he is not doing anything about it; so, carrying out my responsibility as a member of the collective requires that I make this intention explicit—namely, issue the command.

4 On certain puzzles concerning the semantics and pragmatics of practical language

4.1 Three puzzles about entailment

We now apply the assembled apparatus to three semantic puzzles of practical language: the ancient and widely-discussed (e.g., Charlow forthcoming) ‘Ross paradox’ and problem of ‘free-choice permission’; and a more recent puzzle pertaining to hedging (Kolodny and MacFarlane 2010).

4.1.1 Ross’s paradox

The ‘Ross paradox’ is the (if not quite paradoxical, then at least puzzling) contrast between, on the one hand, the nonentailment of ‘post or burn the letter’ by ‘post the letter’, and on the other, the entailment of ‘I am posting or burning the letter’ by ‘I am posting the letter’.

The pieces are in place for a resolution of this perplexity. Entailment is support-preservation; imperative support is implicit requirement of intention: \( c \vdash \nu \Gamma \) just if \( \nu \Gamma^c \in d_c \). It follows that \( \nu \Gamma \vdash \mu H \) just if whenever \( \nu \Gamma^c \in d_c, \mu H^c \in d_c \). As we have seen, \( \nu \Gamma^c (\mu H^c) \) is the set containing \( \langle w,I \rangle \) just if in \( w, \nu \Gamma s (\mu H s) \) just throughout \( I \); as we have seen, \( d_c \) contains that semantic value only if the action-type it represents is part of the best known instruction for implementing some action type antecedently represented on \( d_c \). As we have seen, it is not generally the case that one’s posting or burning the letter is part of the best known instruction for implementing one’s posting the letter. So it will not generally be the case that when \( c \vdash \nu \) posts the letter, \( c \vdash \nu \) posts or burns the letter.

4.1.2 Free-choice permission and deontic modals

The puzzle of free-choice permission concerns why it is that, almost always, when one says ‘you may have an apple or a pear’, one also accepts both ‘you may have an apple’ and ‘you may have a pear’—and, for that matter ‘you may have an apple and you may have a pear’. The puzzle is that ‘you may have an apple or a pear’ seems to be equivalent to ‘you may have an apple or you may have a pear’; and ordinarily it is not almost always so that when one accepts \( \varphi \lor \psi \) one accepts \( \varphi \land \psi \)—ordinarily, that is, ‘or’ does not mean ‘and’. If not, why does it so strongly seem to in this case?

We observed above that there is no permissive mood in any ordinary language: while it is possible to impose requirements by commanding a sentence in the imperative mood, if one wishes to introduce a permission, one has no choice but to assert a declarative sentence—typically of the ‘possibility’ (\( \Diamond \)) modalized sort. So coming to terms with this puzzle requires a treatment of deontic modals.

According to the orthodoxy, a modalized sentence somehow
‘quantifies over worlds’: □φ has a semantic value somehow dependent on whether every world is a φ-world, while ◇φ has a semantic value somehow dependent on whether some world is a φ-world. Typically the idea is to involve a relation between worlds we somehow have in mind, and then to include w in the semantic value of □φ just if every world bearing the relation to w we have in mind is a φ-world and in the semantic value of ◇φ just if some world bearing the relation to w we have in mind is a φ-world. It is hard to see how we could grasp a relation between worlds, inasmuch as any individual world is of indefinite complexity. And the approach seems to overgenerate: if I can have in mind any relation between worlds, I can have in mind the relation that holds just if in one the number of particles is even and in the other it is odd. Having that relation in mind, I might go on to say ‘if the number of particles is even, it is necessarily odd; while if the number of particles is odd, it is necessarily even’, and ‘the number of particles is either necessarily odd or necessarily even’—both crazy statements, to be sure, but why?

More directly relevant to our purposes are certain perplexities about deontic modals. For one thing, ‘you must take out the trash’ and ‘take out the trash’ are apparently equivalent. Relatedly (Anscombe 1963, Ninan 2005), ‘I must take out the trash and I do not intend to take out the trash’ seems ‘Moore-paradoxical’. For another, as Ninan (2005) has observed, ‘Fred must be taking out the trash’ and ‘Fred must have taken out the trash’ both cannot easily be forced into deontic readings, but seem rather to demand epistemic readings; by contrast, ‘Fred may take out the trash’ has a very prominent deontic reading. (The same is true for ‘Fred may be taking out the trash’ and ‘Fred may have taken out the trash’.)

All these data can be accommodated if we are willing to abandon the dogma that modals are quantifiers over worlds.

We first hypothesize that a deontic modal sentence is a modal-ized imperative: the ‘logical form’ of ‘Fred must take out the trash’ is □(Fred take out the trash); of ‘Fred may take out the trash’ is ◇(Fred take out the trash). As we observed earlier, imperatives do not at all easily admit of either progressive or retrospective morphology: ‘Fred be taking out the trash’ and ‘Fred have taken out the trash’ are both barely (if at all) grammatical. If not, there is no modalized progressive or retrospective imperative; so if a deontic modal is a modalized imperative, there is no deontic reading of the modalized progressive or retrospective sentence.

But if so, how is the modal to interact with the semantic value of the prejacent to return a semantic value appropriate to a declarative sentence? Our answer is that modals do not quantify over worlds but over contexts. The fundamental data supporting the quantification-over-worlds theory of modals is the duality of strong and weak modals—but duality is cheap, and quantification over anything will do. Because contexts interact with both declarative and imperative sentences, the modal can easily filter contexts with respect to their interaction with the semantic value of a sentence of either mood. And finally, just as the classical Kaplanian notion of entailment as truth-preservation recognizes ‘diagonal’ modals □ and ◇ which, metaphorically, ‘bind’ where the rigidifier A ‘saturates’, the mindset conception of entailment as support-preservation should analyze necessity and possibility modals as standing in an analogous relation to the Veltman rigidifier ∨.

More explicitly, we want the semantic value of □σ to depend on whether all contexts of a certain class support σ; and we want the semantic value of ◇σ to depend on whether some context of a certain class fails to antisupport σ: where we write c ∈ [σ] for c ⊨ σ and c ∈ [~σ] for c ⊬ σ—-we call these sets the support condition and the antisupport condition of σ. Still more explicitly, we may assume that c keeps track of a set of acceptable mindsets A_c; then, [□σ] = {w : A_c ⊆ [σ]}; while [◇σ] = {w : A_c ⊈ [σ]}.

When A_c = {c}, modals behave like Veltman rigidifiers: □φ
behaves like $\lor \varphi$ and $\lozenge \varphi$ like $\vartriangle \varphi$, with $[\square \varphi]^c$ the trivial proposition just if $i_c \subseteq [\varphi]^c$, the vacuous proposition otherwise, and $[\lozenge \varphi]^c$ the trivial proposition just if $i_c \not\subseteq [\varphi]^c$. Whereas when $\mathcal{A}_c = \mathcal{C}$, the set of all contexts, $[\square \varphi]^c$ is the trivial proposition just if $\text{every coherent context accepts } \varphi$, while $[\lozenge \varphi]^c$ is the trivial proposition just if $\text{some coherent context fails to reject } \varphi$: the former requiring $[\varphi]^c = W$ at every $c$, in effect recapturing the extent of the concept of ‘metaphysical necessity’, and the latter allowing in anything that can be taken seriously without slipping into incoherence—in effect ‘metaphysical possibility’.

This equivalence to rigidifiers prevails when declarative prejacent-ers are swapped for imperatives. When $\mathcal{A}_c = \{c\}$, $[\square \nu \Gamma]^c$ is then the trivial proposition just if $[\nu \Gamma]^c \in d_c$, vacuous otherwise: just like our ‘expressions of intention’, engendering an explanation of our ‘Moorean’ equivalences.

When $\mathcal{A}_c = \{c\}$, $[\lozenge \nu \Gamma]^c$ is then the trivial proposition (and therefore accepted) just if $[\nu \Gamma]^c \not\in d_c$, vacuous (and therefore rejected) otherwise. What does it mean for $[\nu \Gamma]^c \in d_c$? This represents an intention that $\nu$ not $\Gamma$. One with that intention is compelled to follow the best instruction for ensuring that the present tense is not actually during any interval at which $\nu \Gamma$s—namely, is compelled to restrain $\nu$ from $\Gamma$-ing; and in the reflexive case, is compelled to restrain oneself from $\Gamma$-ing. So when that intention is absent, that means one is under no compulsion to restrain oneself (or to order $\nu$ to restrain themself) from $\Gamma$-ing.

Now to free-choice permission, the operative sentence being $\lozenge \nu (\Gamma \lor H)$. When $\mathcal{A}_c = \{c\}$, $[\lozenge \nu (\Gamma \lor H)]^c$ is accepted just if $[\nu (\Gamma \lor H)]^c \not\in d_c$. That means there is no compulsion accepted in $c$ for $\nu$ to be restrained from $(\Gamma \lor H)$-ing. If one $(\Gamma \lor H)$s, one adopts the best means for ensuring that one does at least one of the following: $\Gamma$; $H$; both $\Gamma$ and $H$. Ordinarily, unless the common project has exceptional features, it is up to the audience to decide how to carry out their own intentions: so if the audience need not be restrained from $(\Gamma \lor H)$-ing, the audience need not be restrained from $(\Gamma \lor H)$-ing in whatever way they see fit. And so in particular, the audience need not be restrained from $\Gamma$-ing, if that is the way they see fit; and need not be restrained from $H$-ing, if that is the way they see fit. With neither of those restraints in place, the audience is permitted to $\Gamma$ and is permitted to $H$.

That does not obviously amount to an entailment of ‘one may $\Gamma$’ by ‘one may $(\Gamma \lor H)$’. Some situations do not leave it up to the audience how their own intentions are carried out: situations in which most of us are fortunate not to live, and are perhaps morally reprehensible, but do not violate semantic rules. A warden might offer the following permission for good behavior: ‘you may either have an extra slice of cake or run over there and punch that guard in the face’—both knowing full well that there is no categorical permission to punch the guard in the face, that implementing the disjunctive action in that way rather than the other would be the wrong way to go about it, that the supposed ‘choice’ is in fact a forced choice.

It may well be that, restricting attention to cases of free-choice permission, we only ever see ‘or’ behaving like ‘and’. But we can perhaps credit that to genuinely free-choice cases being just those in which ‘or’ and ‘and’ are indiscernible—as contrasted with forced-choice cases, in which ‘or’ and ‘and’ are discriminable. If so, the appearance that ‘or’ behaves like ‘and’ results from the cases we have chosen to focus on, rather than any strange properties of ‘or’ or ‘and’.

4.1.3 Hedging and conditional imperatives

When uncertain, we often hedge: chary of the worst, we give up on the best. A simple example: at the poison-control clinic, when we know a patient has consumed a toxin, we administer antitoxin alone; when we know the patient has been bitten by a snake, we
administer antivenom alone. When we don’t know, we adminis-
ter both: although that will lead to liver damage, to adminis-
ster the wrong one would mean certain death—a cost not worth pay-
even with the prospect of a complete cure if we administer the right one.

Accordingly, we imagine three doctors, \( T \), \( V \), and \( B \), differing only in what they know about their respective patients: \( T \) is certain her patient has consumed a toxin, \( V \) certain the problem is venom, and \( B \) uncertain which. What do they therefore do? Obviously \( T \) therefore administers antitoxin, \( V \) antivenom, and \( B \) both.

The structure of intention, particularly as regards optimization under uncertainty (page 8), can model hedging. Each doctor knows how to treat a patient: each knows how to administer antitoxin, how to administer antivenom, and to administer both. Each should optimize by the standards of treating the patient—the best outcome life without liver damage, the second best life with liver damage, the worst death—in the means they choose to treat the patient. If uncertainty is processed either by minimax or expected value—but not if processed by maximax—the outcome is hedging: for \( T \), the antitoxin both maximizes the worst outcome and gives the highest weighted-average outcome; for \( V \), the antivenom both maximizes the worst outcome and gives the highest weighted-average outcome; and for \( B \), administering both drugs both maximizes the worst outcome (liver damage is better than death) and gives the highest weighted-average outcome (or at least certain obvious settings of the number yield that result).

Our pragmatic story can be shown to predict that \( T \) accepts the imperative ‘administer antitoxin’, \( V \) accepts ‘administer antivenom’, and \( B \) accepts ‘administer both’.

Now, \( B \) accepts ‘either toxin or venom’. That might be a prob-
lem. For, reasoning by dilemma, assume ‘toxin’ to conclude ‘ad-
minister (just) antitoxin’ and assume ‘venom’ to conclude ‘ad-
minister (just) antivenom’; appealing then to ‘either toxin or venom’, conclude ‘either administer (just) antitoxin or administer (just) antivenom’—a conclusion incompatible with ‘administer both’.

Or, reasoning by reductio, assume ‘antitoxin’ to conclude ‘admin-
ister (just) antitoxin and administer both’ and therefore ‘not-toxin’
and assume ‘antivenom’ to conclude ‘administer (just) antivenom
and administer both’ and therefore ‘not-venom’; conjoining, con-
clude ‘not-toxin and not-venom’—a conclusion incompatible with
‘either toxin or venom’.

Do these arguments show \( B \)’s beliefs to be incompatible with
her intentions? The validity of dilemma projects from a general
property of Boolean algebras, namely that the join of points in set
\( P \) is above—informationally weaker than—the join of points in set
\( Q \) when each point in \( P \) is above its assigned point in \( Q \). Similarly
for reductio: the meet of the points in \( Q \) is below—informationally
stronger than—the meet of points in set \( P \) when each point in \( Q \) is
below its assigned point in \( P \). This justification of these rules re-
quires of a valid use of one of them that each entailment exploited
in it holds between the topic sentences as a projection of the re-
lative informational strength of their contents.

But the entailment of ‘administer antivenom’ by ‘venom’ and
of ‘administer antitoxin’ by ‘toxin’ in the present case does not
project from the greater informational strength of the content of
the conclusion over the content of the premiss. For the conclusions
have no informational strength. They cannot, because they encode
no information. Rather, the entailment stems from the structure of
practical rationality.\(^{17}\)

Kolodny and MacFarlane (2010) wrap this structure in two

\(^{17}\)Note the similar behavior of the Veltman rigidifier and the epistemic modals as discussed at pages 13 and 20: these too exhibit dilemma and reductio failures, thanks to the emanation of their entailment relations not from informational power but from analytic links to their prejacents, together with the non-self-duality of \( \top \), as discussed on page 12.
additional complications. First, the imperatives ‘administer antitoxin’, ‘administer antivenom’, and ‘administer both’ are wrapped in necessity modals, engendering ‘\(\Box (\text{administer antitoxin})\)’, ‘\(\Box (\text{administer antivenom})\)’, and ‘\(\Box (\text{administer both})\)’. In light of the equivalence between an imperative and its strong modalization, this should not influence things. Second, Kolodny and MacFarlane wrap the direct entailments from the declarative ‘toxin’ to the imperative ‘administer antitoxin’ and from the declarative ‘venom’ to the imperative ‘administer antivenom’. Assuming the universal validity of dilemma the conditionals ‘if toxin, administer antitoxin’ and ‘if venom, administer antivenom’. Letting \(\psi\) and \(\phi\) be the contexts of \(T, V\), and \(B\), suppose that \(\mathcal{A}_{\psi,\phi} = \{c^T, c^V, c^B\}\)—and \(c^B\) is therefore realistic. Because \(c^V \in \text{[venom]} \cap \text{[administer antivenom]}\) and \(c^T \in \text{[toxin]} \cap \text{[administer antitoxin]}\), it follows that \(\mathcal{A}_{\psi,\phi} \cap \text{[toxin]} \subseteq \text{[administer antitoxin]}\) and \(\mathcal{A}_{\psi,\phi} \cap \text{[venom]} \subseteq \text{[administer antivenom]}\)—as desired. Because \(c^B\) is realistic, modus ponens is legitimate. Does it remain legitimate when accepting, say, ‘toxin’ within a supposition? This requires a theory of supposition. A simple such theory has it that adding ‘\(\varphi\)’ as a (noncounterfactual) supposition to \(c\) returns as the suppositional context some \(c' \in \mathcal{A}_c \cap [\varphi]\) differing otherwise minimally from \(c\). On this theory, adding ‘toxin’ as a supposition returns the suppositional context \(c^T\). Because the suppositional context differs otherwise minimally, \(\mathcal{A}_T = \mathcal{A}_{\psi,\phi}\), so that \(c^T\) is realistic. So modus ponens is legitimate within the supposition.

\[\llbracket \psi, \phi \rrbracket^c = \{w : \mathcal{A}_c \cap [\psi] \subseteq [\sigma]\}.\]

About modus ponens, the approach says the following. Let \(c\) be realistic just if \(c \in \mathcal{A}_c\). If \(c \models \psi, \phi\), then \(\mathcal{A}_c \cap [\psi] \subseteq [\sigma]\). If moreover \(c\) is realistic, then if \(c \in [\psi], c \in [\sigma]\). So whenever realistic \(c \models \psi;\) if \(\psi, \sigma, c \models \phi\)—so modus ponens is legitimate over all realistic \(c\). A conditional will not be an ‘inference ticket’ for a nonrealistic context. So whenever a conditional has inferential oomph, modus ponense is legitimate. So modus ponens is for practical purposes indiscriminable from a valid rule.\(^\circ\)

The conditional functions as desired as an object-language reflex of entailment. To see this, note that \(B\) accepts ‘if venom, administer antitoxin’ and ‘if toxin, administer antitoxin’. Letting \(c^T\), \(c^V\), and \(c^B\) be the contexts of \(T, V\), and \(B\), suppose that \(\mathcal{A}_{\psi,\phi} = \{c^B, c^T, c^V\}\)—and \(c^B\) is therefore realistic. Because \(c^V \in \text{[venom]} \cap \text{[administer antivenom]}\) and \(c^T \in \text{[toxin]} \cap \text{[administer antitoxin]}\), it follows that \(\mathcal{A}_{\psi,\phi} \cap \text{[toxin]} \subseteq \text{[administer antitoxin]}\) and \(\mathcal{A}_{\psi,\phi} \cap \text{[venom]} \subseteq \text{[administer antivenom]}\)—as desired. Because \(c^B\) is realistic, modus ponens is legitimate. Does it remain legitimate when accepting, say, ‘toxin’ within a supposition? This requires a theory of supposition. A simple such theory has it that adding ‘\(\varphi\)’ as a (noncounterfactual) supposition to \(c\) returns as the suppositional context some \(c' \in \mathcal{A}_c \cap [\varphi]\) differing otherwise minimally from \(c\). On this theory, adding ‘toxin’ as a supposition returns the suppositional context \(c^T\). Because the suppositional context differs otherwise minimally, \(\mathcal{A}_T = \mathcal{A}_{\psi,\phi}\), so that \(c^T\) is realistic. So modus ponens is legitimate within the supposition.

\(^{18}\)If there were a counterexample, it would perhaps look like this. Sam and Fred both accept \(\psi\). Sam and Fred both reject \(\varphi\). Sam recognizes that Fred accepts certain other doctrines that commit him to if \(\psi, \varphi\). Attempting to talk him out of those doctrines, Sam renders her context nonrealistic (converting her acceptability-set to the singleton of Fred’s context) and asserts if \(\psi, \varphi\). She hopes Fred will recognize the unpalatability of \(\varphi\) and the security of \(\psi\) and therefore reject the conditional and the problematic doctrines leading him to accept it. Is that a possible use of the conditional?
4.2 Puzzles of speech acts

Our pragmatic story suggests treatments of the use of imperatives in speech acts other than command (Portner 2007): such as in advice (‘think it over first’) or permission (‘have a cigar’).

4.2.1 Imperatives of advice

With imperatives used as advice, there need be no incorporation of speaker and audience for a common project. An especially clear case of absence of a common project is the imperative hurled derisively, like ‘get a haircut’ or ‘go back to where you came from’: because derisive, the speech act must exclude the sort of fellowship that comes with incorporation and which legitimates command. Rather, the speech act seems to be that of advice: indeed, its derisive force emanates from a purport to adopt a posture of greater wisdom than the target—the implication being that the speaker knows what the audience does not, namely that the audience would be better off if they got a haircut or went back where they came from instead of foolishly persisting in their contrary choice. The advice imperative is also affiliated with the ‘if I were you’ conditional: ‘if I were you, I would think it over first’ and ‘if I were you, I would get a haircut/go back to where I came from’ seem to be equivalent to the associated imperatives (if the latter conditional is more genteel or more subtly menacing in its derisiveness than the hurled imperative).

Extending our treatment of conditionals, we can say that for an ‘if I were you’-conditional used by $s$ with addressee $a$, the impossibility of ‘I am you’ (at least against the presupposition that we are numerically distinct) suggests that the antecedent works not to restrict $\mathcal{A}_\psi$ by intersecting with the support condition of ‘I am you’. What does it do? Perhaps it directly adjusts $\mathcal{A}_\psi$ to the singleton $\{c^a\}$; the restrictive component is then trivial. In that case, ‘if I were you, I would $\Gamma$’ has as its semantic value

\[ \{w : \{c^a\} \subseteq [\text{would}(\Gamma)]\}. \]

The subjunctive, represented here by past-tense morphology, may be in place as a pragmatic marker reflecting the nonrealism of $\mathcal{A}_\psi$: the familiar ‘counterfactual’ conditional ‘were $\psi$, would $\varphi$’ is subjunctive and presupposes rejection of ‘$\psi$’ (and therefore ‘if I were you, I would $\Gamma$’ is $\{w : \{c^a\} \subseteq [\Gamma]\}$—acceptable only if, in the estimation of the speaker, the audience is at least implicitly committed to the self-directed imperative ‘$\Gamma$’.

Summing up, it is plausible that ‘if I were you, I would think it over first’ is an attempt to express as from the audience’s context the reflexive imperative ‘think it over first’, an imperative the audience’s context supports just when the audience has the intention to think it over first. In this way, the conditional is suggestive of an attempt to ‘direct-inject’ the intention into the audience’s mindset rather than brokering the audience’s adoption of the intention by way of a common project.

Returning to the imperative used as advice: our idea is that the same result is intended without the heightened explicitness about the shifts of perspective involved—that advising ‘think it over first’ is simply a purported self-command on the audience’s behalf to think it over first.

4.2.2 Imperatives of permission

In a ‘biscuit’ conditional like ‘there are biscuits on the sideboard if you want them’, conditionality is in the act rather than the content. One does not unconditionally assert a conditional meaning, but rather conditionally—on the addressee’s wanting biscuits—asserts an unconditional meaning—that there are biscuits on the sideboard. If the condition is unmet, the assertion goes away—
Perhaps a permissive assertion of an imperative is similarly biscuity. ‘Have a cigar’ used permissively seems to have the same meaning as ‘if you would like a cigar, have a cigar’. The motivating force of the imperative may perhaps be our common project of getting you what you like—in which case the permissive imperative is a biscuit-command, and that conditional is as thoroughgoingly revelatory as possible.

But perhaps more phenomenologically on-key is the motivating force emanating the addressee’s solipsistic project of getting what she likes—in which case the permissive imperative is biscuit-advice. The equivalent revelatory conditional would then be ‘if you would like a cigar, if I were you, I would have a cigar’. The increment of phenomenological adequacy stems from the incredible cheapness of permissive imperatives: having only just met Sam, and having no idea about her likes or dislikes, and wishing not to assume the intimacy that typically goes with collective concern for the likes and dislikes of the other, ‘have a cigar’ would be entirely appropriate. Indeed, the brazenly cheap jollity associated with this gesture is captured in the chilly distance of the double conditional: I assume nothing about the other and give nothing of myself beyond an elemental fragment of my cigar inventory.

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19Perhaps this works semantically by way of conditionalizing not the content that is the essential effect of an assertion of the consequent but rather the content that is the ‘accidental effect’ of that assertion (Stalnaker 1998): the injection into the common ground of the belief that the speaker has just asserted the sentence. ‘Forget I mentioned it’ is exactly what the audience is hoped to do when the antecedent is rejected.
References


