Evolutionary pragmatics: 
From chimp-style communication to human discourse 

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Abstract

One of the most distinctive features of social interaction in our species is that we use language to coordinate our future activities, and in many cases far ahead. Non-human hominids don’t do this, as a consequence of which their interactions remain comparatively simple and short-range. I argue that the evolution of communication for future coordination was enabled by two developments: an increase of responsiveness during the communicative exchange and the emergence of normative behaviours in the follow-up. Responsiveness was required to coordinate future interactions, but wasn’t enough for coordinating interactions beyond the immediate future, which required normativity, to boot.

Introduction: evolutionary pragmatics

Like football, funerals, and folk dancing, language is a social practice: a rule-governed group activity. Its chief purpose is communication between people, and most of the time its use is intertwined with other social activities. In a word, language is first and last a pragmatic affair. Nonetheless, the bulk of extant research on the evolution of language is not about pragmatics. It is about lots of other things instead, but two broad categories stand out. First, attention is lavished on communicative means: syntax, phonology, gesture, and so on. Secondly, cognitive capacities of various kinds are discussed widely and vigorously: recursive thought, intentionality, social cognition, and so on; and though it may be true that some of these discussions purport to be about pragmatics, in fact they are mostly about the psychology of language users rather than their interactions.

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The evolution of language is a big and many-sided topic, which must be approached from many different angles if we are to make progress at all. In that spirit, I'm advocating an evolutionary pragmatics whose starting point is the truism that language is a social practice, and which focuses on communicative interactions between people, rather than the linguistic means or cognitive capacities they employ (but without denying in any way the relevance of these means and capacities). As a consequence, my approach may seem a bit outlandish, not only because its focus is squarely on pragmatics, but also because its main roots are neither in linguistics nor in psychology, but in primatology and the philosophy of language. It draws on the former for data collected in the field rather than the lab, and on the latter for ways of understanding language use that highlight interactivity and the pervasive normativity of social interaction in general and language in particular (Austin 1962, Brandom 1994, Kukla and Lance 2009). My own views on these topics are set out in Geurts (2019a), which provides the theoretical framework for this paper; the relevant bits are presented below, but only summarily and on a need-to-know basis.

My methodology is standard in that I will suppose that chimpanzees (understood broadly as including bonobos) provide the best referential model for early hominin behaviour (Moore 1996, Falk 2000). In particular, I will assume that, at some stage in our lineage, our ancestors embarked on social and communicative practices that were broadly similar to those observed in modern chimpanzees, at least in the sense that communication served to coordinate joint activities, which I argue remains the principal use of language to this day. In this respect, human discourse is continuous with chimp-style communication, but there is an important difference, too: whereas chimpanzees only communicate to arrange their joint activities on the spot, hominins have become adept at coordinating their future interactions by communicative means.

We use language to make appointments, maintain friendships, get married, negotiate business contracts, pass laws, and so on, all of which constrain our actions over longer periods of time, and often deep into the future. This is one of the key features that make human discourse vastly more powerful than any other form of communication on the planet. The objective of this paper is to develop an account of the transition from chimp-style communication to human discourse, in which the emergence of long-range coordination is the main explanandum.

The story of this paper goes as follows. To begin with, I compare and contrast chimp-style communication with human discourse, arguing that, whereas action coordination is a central function of both, future-action coordination is distinctive of the latter (§1). This form of coordination is made possible by
two special traits of human sociality, which is responsive and normative in ways that chimp-style sociality is not. Responsiveness is required to coordinate future interactions, but isn’t enough for coordinating interactions beyond the immediate future; for that, normativity is required, as well. Although these behaviours are complex, I try to show in some detail how they could have evolved piecemeal and from humble beginnings (§2). I conclude by comparing the proposed framework to some alternatives (§3).

1. Chimp-style communication vs. human discourse

Language is used in countless different ways: we talk to each other at the breakfast table, in shops, classrooms, confessionals, or on the phone; we talk to ourselves, deliver sermons and speeches, write reports, novels, tweets, and emails, and so on. All these and many more are common uses of language, but as Fillmore (1981: 152) puts it, “the language of face-to-face conversation is the basic and primary use of language, all others being best described in terms of their manner of deviation from that base.” Fillmore’s point is supported by the fact that face-to-face discourse is commonly practiced in all human societies, that it doesn’t require any special skills, and that it is the mode in which children acquire their first language. Clark (1996: 8-11), to whom these observations are due, develops the argument by listing nine features of face-to-face discourse:

1. Copresence: participants share the same environment.
2. Visibility/audibility: participants can see/hear each other.
3. Instantaneity: participants perceive each other’s actions immediately.
4. Evanescence: the medium fades quickly.
5. Recordlessness: participants’ actions leave no record.
6. Simultaneity: participants can produce and receive at once.
8. Self-determination: participants decide for themselves how to act.
9. Self-expression: participants don’t act on behalf of another person.

All derived forms of language use lack at least some of the features, and following Fillmore’s suggestion, may be characterised in terms of the features they don’t have (see also Bavelas et al. 1997).

This, then, is basic human discourse, and it is instructive to note that many of the communicative interactions that chimpanzees engage in have all the features listed by Clark. These interactions are mostly gestural, rather than vocal, and they are typically associated with such social activities as grooming, playing, travelling, and sex. This is not to say that chimpanzees engage in basic human discourse, for it will be evident that Clark’s list doesn’t
define what that is, but it does point to a set of chimp-style communicative behaviors that is as a good a candidate as any for being a precursor to human discourse. Note, incidentally, that this set does not include the long-distance calls which chimpanzees, like many other animals, use to broadcast the presence of predators or quality food, for example. Even though such calls have received a lot of publicity (Skyrms 2010, Scarantino 2013, Price et al. 2015), they lack several of the characteristics of face-to-face discourse, and therefore are likely to be an evolutionary cul-de-sac.

In recent years, researchers have begun to catalogue the uses of great-ape gestures (Genty et al. 2009, Byrne et al. 2017, Graham et al. 2018). Although ape gestural repertoires are fairly large, with over 70 gestures in the typical chimpanzee repertoire, the number of distinct uses is proportionally small. For example, from a sample of 2,321 bonobo gesture tokens, Graham et al. (2018) distilled a mere 14 distinct uses:

- Acquire object/food
- Move closer
- Climb on me
- Reposition
- Climb on you
- Initiate copulation
- Contact
- Initiate genito-genital rubbing
- Follow me
- Travel with me
- Initiate grooming
- Move away
- Mount me
- Stop behaviour

Although this list may seem short, it clearly underestimates the riches of chimpanzee communication, but even so it is of great interest as it stands. It is a well-worn observation that chimpanzees communicate mainly, not to exchange information, but to get things done. Graham et al.’s list confirms this observation, but what is especially striking is that the majority of signals it contains project joint activities.¹ This observation is critical, because the same may be said of basic human discourse, and therefore it seems that the chief purpose of these two systems of communication is the same, suggesting a significant continuity between the two systems. I maintain that this continuity is real, even if the ways in which communication subserves the coordination of social interactions are a lot more more complex and powerful in humans than in non-human hominids. In the remainder of this section I will expand on this general picture, with emphasis on the specific features of human discourse.

Picture the scene: chimpanzee Barney wants to have sexual intercourse with chimpanzee Betty, so he walks over, makes sure that he has her attention, and produces a gesture that we might paraphrase as, “Wanna have sex?” What happens next is remarkably straightforward: Barney and Betty either have

¹. Here and in the following, I use the term “joint activity” non-technically, to refer to activities that individuals engage in together.
sex or they don’t. In the former case, there is no further communicative fuss, nothing like, “Sure, why not?” or “Yes!” or “Okay.” Barney and Betty just get down to it. In the latter case, Barney may insist and repeat his request (if that’s the right word), and Betty may tell him off after a while, but she is just as likely to simply ignore him and go on with her own business.

Now contrast this with the sapient way of arranging a meeting. I propose that we have lunch later this week. You accept, and we proceed to negotiate the details, agreeing on a day, time, and place. And then, several days later, we meet at the agreed time and place to have lunch together. By chimp standards, this is nothing short of miraculous, and there is more, for in the intervening period we adjust our activities, if needed, so as to keep our appointment, and if one of us feels forced to renege, he will get in touch with the other to apologise, explain the situation, and arrange a new appointment.

In both scenarios, the initial communicative act projects a joint activity: sex for the chimpanzees, lunch for us. The key difference is that, whereas in chimpanzees the projected activity is contiguous with the communicative act, humans may allow for any amount of time to elapse between the two. This is one of the main features that make human-style discourse so powerful. It enables us to make plans together, and more generally, to coordinate our future activities: to build schools and hospitals, organise public transportation and football competitions, put some clowns on the moon, and so on.

My point is not that we are better planners than chimpanzees. We are, but the contrast I’m drawing concerns not our respective cognitive powers, but our communicative practices and their follow-up, which must be contiguous for chimpanzees but not for us. Why is that? My answer comes in two parts: human discourse is fundamentally responsive and normative in ways that chimp-style communication is not. While responsiveness enables future-action coordination, normativity is required to coordinate our actions beyond the immediate future. I will elaborate on each of these ideas in turn.

1.1. Responsiveness

Let’s have a closer look at appointments. Making an appointment inevitably involves some communicative back and forth between parties. I proposed to have lunch later this week, you accepted my proposal, we negotiated a time

2. Brinck and Gärdenfors (2003) make a distinction between cooperation here and now and future-directed cooperation. Although this is obviously related to the distinction I’m drawing, there are two important differences. First, whereas Brinck and Gärdenfors’s distinction is dichotomous, mine is not. Secondly, while their distinction concerns forms of cooperation in general, mine is about the relation between communicative exchanges and projected activities.
and place, and so forth. Making an appointment is a joint project. More precisely, it is a joint project that serves to arrange a joint project. It may seem that this is a special feature of some communicative interactions only, and not representative of human discourse in general. And indeed, according to the orthodox view, the addressee is a more or less passive receptacle for information dispensed by the speaker:

Human communication has some extraordinary properties, not shared by most other kinds of human behavior. One of the most extraordinary is this: If I am trying to tell someone something, then [...] as soon as he recognizes that I am trying to tell him something and exactly what it is I am trying to tell him, I have succeeded in telling it to him. (Searle 1969: 47)

As Searle would have it, the communicative effort falls predominantly on the speaker; all the hearer has to do is understand what the speaker is trying to say. However, this way of looking at human communication has been losing ground for a century, if not longer, and it is now uncontroversial that the asymmetry between speaker and hearer is not nearly as strict as tradition makes it out to be (Clark 1996, Bavelas et al. 2000, Enfield 2017). Here are two real-life exchanges that illustrate the point especially vividly:

A: That tree has, uh, uh,...
B: tentworms.
A: Yeah.
B: Yeah. (Clark and Wilkes-Gibbs 1986: 6)

A: Now, – um do you and your husband have a j– car
B: – have a car?
A: Yeah.
B: No. (Clark 1996: 242)

In both cases, B’s first contribution is to assist A in making his. Somewhat paradoxically, on the orthodox view that is, B helps A to make a statement and ask a question, respectively. Then A says “Yeah” to acknowledge that he accepts B’s help, and only then does B respond.

Although these examples may seem special, there is ample evidence that, in general, addressees are active contributors to the discourse even when it isn’t their turn to speak. Their contributions come not only in the form of supplementations, as in the examples above, but also, and more importantly, in the form of various kinds of affirmative signals (“okay”, “yes”, “right”, “yeah”, “mhmm”) and body language (nodding, shrugging, eye gaze, facial expressions). These signals are not just idle accompaniments to the speaker’s performance. As was shown by Bavelas et al. (2000), speakers need these signals, and may become seriously disoriented if they cease coming. In their study, Bavelas
et al. asked one participant to tell a story from their own experience, while a second participant was instructed, unbeknown to the other, to perform an irrelevant task while listening to the story. This extra task crippled the hearers’ responsiveness, which turned out to have a deleterious effect on the quality of the story-telling, causing speakers to hesitate, go in circles, and produce irrelevant information. These findings demonstrate the significance of moment-by-moment collaboration in human discourse.

Hearers’ real-time responses may express a variety of states, ranging from understanding and interest to emotions like empathy, horror, or disgust. But their principal function is to express agreement, enabling speakers and hearers to coordinate their actions by symbolic means:

A: Lunch at 12?
B: Sure.

In this mini-discourse, A proposes a lunch appointment, but it is B who clinches it simply by saying “Sure.” If B hadn’t responded or had changed the topic, there wouldn’t have been a lunch appointment. Unlike chimpanzees, human speakers express agreement on a regular basis, and it is hard to overstate the importance of this practice. Without it, human discourse would not have the formidable coordinative power that is its hallmark.

The comparatively low level of responsiveness that distinguishes chimpanzee communication is mainly down to a relative lack of responsiveness on the audience’s part. Chimpanzees typically look at their audience before gesturing, attempt to draw their attention if necessary, wait to see if their gestures have the desired effect, persist in their communicative efforts if they don’t, and so on (Hobaiter and Byrne 2011). But while chimpanzees work hard on the production side, their efforts are not matched at the receiving end. In sum, the transition from chimp-style communication to human discourse required that audiences become more responsive; in particular, they had to acquire the habit of expressing agreement.

1.2. Normativity

Once B has signalled her agreement, A and B have proceeded from making an appointment to having one. Appointments are relational states. Specifically, they are shared commitments to a goal, namely, the goal of getting together for a given purpose at a given time and place. In the case at hand, the joint goal is that A and B meet at noon to have lunch together. Both A and B are committed to that goal, and furthermore, A and B’s commitments are mutual: A is committed to B and B to A.
Commitments are relations between individuals; specifically, they are normative relations that govern the actions of their relata. Given that A and B are committed to the same goal, each is accountable to the other for undertaking any actions required for realising their goal, and not undertaking any actions that might jeopardise it; and each is entitled to expect the other to act accordingly. Hence, A’s actions are guided not only by his commitment to B, but also by the expectation that B will honour her commitment to A; and vice versa. This is how A and B’s appointment acts as a device for coordinating their actions, even at great spatio-temporal distances.

It is in the nature of commitments that they are relatively stable, for otherwise they couldn’t serve their purpose of enabling action coordination. This is not to say that commitments are immutable, for occasionally we break or withdraw our commitments due to unforeseen circumstances, negligence, or forgetfulness. Still, once undertaken, a commitment persists by default until it is fulfilled. If we agree to meet again in a year’s time, for example, we come to share a commitment which persists by default until we meet. Hence, the persistence of commitments is a key element of the story: it accounts for the fact that language can be used to coordinate our actions beyond the immediate future.

What is it that makes commitments persist? How is it that individuals remain bound to their commitments by default? There is no simple answer to this question as far as I know, but part of it surely is that we have been inculcated with the feeling that we must comply with our commitments. Most of us feel bad about breaking a promise, for example. Another part, which I believe is at least as important, is that we have at our disposal a comprehensive menu of normative strategies which help to ensure that commitments are kept alive until they are fulfilled, and thus serve as reliable coordination devices. Suppose I promised a friend to help her paint the house next month. Then she may remind me of my commitment every now and then or ask me to reaffirm it, and should I break my promise, she may insist on an apology and a proper justification, which is awkward and may put stress on our relationship, and she may report my misconduct to others, harming my reputation amongst a wider circle of people. And what is more: my friend is entitled to employ these tactics, which means that it would be wrong of me to blame her if she did so. In short, my commitment is buttressed by a complex system of entitlements on my friend’s part, which motivate me to keep my promise.

The following discussion is sketchy at best, and restricted to goal-directed commitments; see Geurts (2019a,b) for a more general account and further details. Related theories have been proposed by Brandom (1994), Walton and Krabbe (1995), Kukla and Lance (2009), and Krifka (2015), among others.
Our social interactions are pervasively normative: we judge each other’s actions, justify our own, ask others to justify theirs, praise, criticise, and correct one another, and so on. Communicative interactions are no exception: we seek to use words “correctly” and produce “grammatical” sentences, correcting others if they don’t, and allowing ourselves to be corrected if we don’t. But most relevantly, for present purposes, we engage in discourse for making and sharing commitments of various kinds; and commitments are relationships upheld, inter alia, by rafts of entitlements. This is how we coordinate our interactions even over longer stretches of time.

In recent years, there has been much discussion about the extent to which non-human animals engage in normative behaviour, if they do so at all (Schlingloff and Moore 2018, Schmidt and Rakoczy 2019, Vincent et al. 2019). My general impression is that, as things currently stand, the evidence for normativity outside our species is scant, but more to the point, I’m not aware of any evidence that non-human hominids, or any other animals for that matter, undertake commitments, be it by communicative means or otherwise. Chimpanzees don’t make appointments. This is not to deny that they are capable of doing so. Actually, I’m inclined to believe that they are, and it would make my job easier if they were. My claim is just that, as a matter of empirical fact, the normative practice of appointment-making doesn’t seem to be part of the chimpanzee repertoire.

2. From chimp-style communication to human discourse

I have argued that there are two main reasons why chimp-style communication fails to support action coordination into the future. One is that it isn’t sufficiently responsiveness; in particular, chimpanzees don’t signal agreement. Secondly, once an agreement has been made, the resulting commitments have to be sustained for as long as it takes, which requires normative behaviours that chimpanzees don’t engage in.

It follows from this diagnosis that a model of the transition from chimp-style communication to human discourse will have to explain how and why signalling agreement and sustaining commitments entered our ancestors’ behavioural toolkit. Naturally, in order to qualify as a credible evolutionary account, our model should not posit any magical moments or indulge in cart-before-the-horse reasoning. Ideally, these behaviours should emerge gradually and without presupposing an understanding of agreements or commitments. These are our main desiderata.
2.1. Responsiveness

The gestural resources of chimpanzees include signals whose linguistic counterparts have acquired more general negative meanings (cf. Graham et al.’s 2018 list, discussed in §1). For example, in English and Dutch, the expression “Go away” may be used to express disbelief. Given these attested patterns of language change, it is possible that, in the transition from chimp-style to hominin communication, the same sort of development produced expressions of disagreement. Expressions of agreement are a different matter, because, to the best of my knowledge, there is no evidence for an etymological pathway from, say, “Come closer” to “I agree.” Fortunately, there is another and simpler way of expressing agreement:

A: Coffee?
B: Coffee!
A: Let’s go!
B: Let’s go!

In these examples, B signals agreement simply by repeating A’s utterance. Echoing is a common form of affirmative response, which in some settings is fully conventional:

A: We will have two cappuccinos and a macchiato, please.
B: Two cappuccinos and a macchiato, coming up.

Conventionalisation is taken to an extreme in formal regulations for exchanges between pilots and air-traffic controllers, which specify in detail which parts of a message must be “read back”, resulting in discourses like the following (from Wu et al. 2019: 56), where A is the controller and B the pilot:

A: China Southern 325, runway 34 left, cancel STAR, expect independent visual approach.
B: 34 left, STAR cancelled, independent visual approach, China Southern 325.

Echoing is not the only low-cost method for signalling agreement. Perhaps appreciative grunts or head movements gradually evolved into agreement signals (cf. Schneider et al. 2010), or perhaps it began with some combination of these devices. No matter. What matters is just that, initially, any of them could have been used involuntarily and without the deliberate purpose of signalling agreement; for that function emerged gradually.

Here’s how it may have gone. One fine prehistoric afternoon, hominin Fred comes up to Wilma and produces their conventional courtship signal. Wilma is so excited about the prospect of having sex that she involuntarily echoes the signal, after which they go to find themselves a quiet spot. This sequence of events repeats itself often enough that what began as an inconsequential echo
becomes positively correlated with the projected outcome, and the hominin pair start adapting their behaviour to the correlation: if one signals “Sex?” and the signal is echoed, their confidence that sex is nigh increases, and each will be more willing to wait for the other to finish their current business.

Generalising from this scenario, the idea is that, every once in a while, a signal for initiating a joint activity is followed first by an echo and then a positive outcome, resulting in a positive correlation between echo and activity that makes it seem as if they formed a package, enabling participants to tolerate some delay between the two.

Thus, Fred and Wilma have found a way of coordinating their future interactions, and without enriching their repertoire of signals; the innovation is purely pragmatic. However, although this new form of communication is useful, its reach into the future is limited. Suppose that, having duly echoed Fred’s courtship signal, Wilma leaves the scene and doesn’t return for a while. How long is Fred able to wait before he runs out of patience or has forgotten what he was waiting for? Given that, being an early representative of the hominin line, Fred’s executive functions are even less developed than his present-day descendants’, the answer is likely to be: “Not very long.”

2.2. Normativity

The problem is that, as things currently stand, the connection between signal, echo, and projected activity is merely statistical. As a consequence, it will support action coordination over relatively short time spans only, and even that may require special conditions; for example, it may be that individuals are able to keep track of an “appointment” only as long as they can see each other (cf.). I’m using scare quotes here because, strictly speaking, the word “appointment” doesn’t apply at this stage: it is a normative expression, and Fred and Wilma’s interactions aren’t normative, yet, or at least not in any relevant way. They are not yet versed in the dos and don’ts that sustain the commitments which come with appointments.

These dos and don’ts are rich and complex. Suppose, again, that we have a lunch appointment. Then each of us may remind the other of our shared commitment, and there are quite a few normative circumstances that militate against breaking it. Should I fail to show up, my standing with you will suffer, which may affect our future interactions. You may report my misconduct to others, which would harm my reputation with a wider circle of people. And so on. Having an appointment is a relationship that comes with a sizeable store of normative corollaries: conditional commitments and entitlements of the form, “If so-and-so is the case, then you may/must act like this.” This holds not only for appointments, but quite generally for the interpersonal
effects of language use: having promised A to..., having asked B to..., being permitted by C to..., and so on.

How did such stores evolve? Piecemeal, of course. Although the set of normative corollaries of an appointment is large, its structure is modular. Mastering the art of having an appointment, as we know it, is a matter of degree. You can be pretty good at it, even though you’re bad at pulling out of a date, or dealing with a no-show. As a consequence, children can gradually acquire the sets of normative corollaries that are relevant in their culture, and by the same token such sets may evolve gradually.

Amongst the many strategies that may serve to sustain commitments, there is one that stands out: sanctioning. It is generally agreed that sanctioning can be an effective way of upholding norms, especially in small, closely knit groups with many repeated interactions (Smith 2010, Bicchieri et al. 2018), and some authors go so far as to claim that sanctioning is the essence of social normativity (Bendor and Swistak 2001). While that is as it may be, sanctioning appears to be a basic form of normativity, which unlike many if not most of our normative behaviours does not require language; it is also one of few forms for which there is at least suggestive evidence in non-human animals (Suchak et al. 2016). Therefore, it is a plausible candidate for early adoption in the evolution of (post-)communicative behaviour.

So, let’s suppose that Fred and Wilma add sanctioning to their set of social strategies: if one stands the other up, he or she gets the cold shoulder for a while, and will think twice before reoffending. Now something distinctly like making and having appointments is beginning to emerge, and I think it’s fair to say that, by this point, Fred and Wilma have come to engage in a communicative practice that serves to make and share commitments. These commitments are primitive in the sense that they are sustained by a single form of normative behaviour, while ours are much richer in this regard. Still, the key elements are now in place: appointments are made by mutual agreement and the resulting commitments persist, at least in part, because they are sustained by normative behaviours.

Sanctioning is a rather crude device in two respects. First, it works best if it is recognised as such, and there is always the risk that the receiver fails to connect the punishment with the offence. Secondly, sanctioning may harm social relationships, which is particularly relevant in small groups. In modern society, people are rarely punished for failing to show up for an appointment, which in large part is likely due to the fact that they actively seek to avoid missing appointments in the first place, not only by keeping track of their own appointments and issuing reminders to others, but also by trying not to miss appointments without notice. Should we decide, for whatever reason, that we cannot keep an appointment, we will attempt to defuse the situation.
beforehand by getting in touch with the other party, apologising, offering excuses, and so on. All this, and more, is part of our everyday normative practice of making and managing appointments.

Note that, whereas sanctioning may but need not be a communicative practice, all these normative behaviours employ communicative strategies for managing commitments, which involve either reference to abstracta (“We have an appointment”) or meta-talk, i.e. communication about communication (“We said we would meet”). Thus we have come to a critical juncture in the evolution of communication as well as normativity, for two reasons. First, because it seems that human normativity involves language to a quite considerable degree, and second, because the linguistic resources that it requires are not in the repertoire of non-human hominids.

The question we are now facing is a big one: how did the evolutionary trajectories of communicative and normative practices interact? Obviously, even if I had a full answer (which I don’t), this is too big a question to be answered here. However, I do have a suggestion as to what may have been a plausible early step. It’s meta-talk. Although prima facie meta-talk may seem to be a marginal and perhaps vaguely esoteric use of language, it is actually quite simple, common, and remarkably versatile. To explain, consider the following example:

A: “B said: ‘Es una barbaridad’.”

Cognitively as well as linguistically, this is utterly simple. In essence, speaker A’s utterance merely associates speaker B with a copy of her utterance, and A may be doing this even without understanding what B said. Therefore, it doesn’t come as a surprise that infants start using verbs of saying before their second birthday. Moreover, it turns out that adults use them a lot. The English verb “say”, for example, ranks among the most frequent verbs of the language.\(^4\) It isn’t hard to see why this is so. We take a keen interest in each other’s doings, and since language use is a highly significant form of social action, we make a point of attending to what others say, employing meta-talk to attend to utterances made out of earshot.

Hence, the practice of engaging in meta-talk may have arrived soon after our ancestors had started combining signals, paving the way for a plethora of normative devices for making and upholding commitments, such as reminding (“You said that . . .”), reneging (“I said that . . ., but alas . . .”), reporting

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4. According to the CHILDES corpus of child language, the verb “say” outranks “give” and “pull” by the second birthday (childfreq.sumsar.net). In the COCA and BNC corpora of adult English, “say” is the fourth and fifth most frequent verb, respectively (wordfrequency.info; ucrel.lancs.ac.uk/bncfreq).
(“Wilma said that...”), and so on. Of these devices, reminding is perhaps the most basic. Chimpanzees are adept at nagging each other, which could have been a precursor of reminding as a normative practice. Be that as it may, if Fred and Wilma adopted this practice, they could keep their appointments alive by reminding each other, thus overcoming, at least to some degree, the limitations of memory, attention, and patience.

2.3. Settings for pragmatic innovation

The foregoing discussion centred around a pair of hominins who developed increasingly sophisticated ways of coordinating their sexual pursuits. Some readers may have wondered how likely it is that this setting could have provided selective pressure for the developments I hypothesised. As a matter of fact, this possibility is considerably less remote than it may seem, and in order to explain why, we’ll have a closer look at chimpanzee mating practices. Chimpanzees have three types of mating strategies, which are conditional on several variables, including group size, proportions of immature males, proportions of females in oestrus, and so on (Tutin 1979, Morin 1993, Wroblewski et al. 2009). The most common strategy is opportunistic mating, which is non-competitive, and may involve any individuals regardless of age or rank. The second is possessive mating, which means that a male forms a short-term relationship with a female and tries to prevent lower-ranking males from mating with her.

The third strategy is that a male and a female enter into a “consortship”, leave the group and remain on their own for a while, avoiding the other members. Even though this strategy is the least common, it allows females to exercise partner choice and arguably gives all males other than the alpha male the best odds of reproductive success (Morin 1993: 187). On the other hand, consortships are risky for both partners. When found out, either partner, but especially the male, may encounter aggression from other males, and as consortships often take place at or even beyond the community perimeter, the pair is more likely to encounter intercommunity aggression, in which the female risks losing dependent offspring, to boot.

5. In Geurts (2020), I present a model of the evolution of mental-state attribution (“Barney thinks that...”, “Betty intends to...”) according to which such attributions originate in meta-talk. If that account is put together with the current one, the implication is that mental-state attribution and many of our normative behaviours share the same evolutionary roots. This connection becomes particularly significant if it is true, as I argued in my earlier paper, that mental-state attribution is a normative behaviour.

6. Note, incidentally, that reminding is standardly used to avoid a problem with basic forms of sanctioning that was mentioned before: it serves to connect the punishment to the crime. Therefore, in our species, sanctioning usually has a communicative component.
Since consortships may provoke aggression from other males, starting a consortship requires caution. When seeking to initiate a consortship, the male typically waits for an opportunity to lead the female away from the group while other males are distracted or absent; for instance, when the female lags behind a travelling group or after the other members of the group have settled for the night. In short, consortships are high risk/high gain strategies for chimpanzees, but their ways of initiating a consortship are opportunistic and ad hoc.

Given that consortships may well be the best reproductive strategy that chimpanzees have at their disposal, it is remarkable that they are so rare. Presumably, this is due, at least in part, to the fact that chimpanzees’ strategies for arranging consortships are not particularly effective. This situation might be improved considerably by adopting a communicative strategy along the lines discussed in the foregoing: the male proposes to the female, using a courtship signal that is in their repertoire already; the female echoes the signal, and casually ambles off into the forest, while the male potters about for a while until he starts walking in the same direction, but only after having made a tactical detour, so as to arouse as little suspicion as possible.

Clearly, this strategy for initiating consortships is likely to be more effective than the opportunistic strategies used by chimpanzees: the odds of securing a consortship and getting away with it unscathed are better, because there is less need to wait for the right moment, and the strategy is less likely to be detected by third parties. Given that, moreover, consortships are the most successful reproductive strategy, this is a setting that may have helped to exert selective pressure for bringing about a more interactive style of communication.

Another setting that may have been a hotspot for the evolution of hominin communication is group hunting. All chimpanzees hunt small mammals for meat, but hunting practices differ notably between populations. In West Africa, hunting is often collaborative, with kills tending to be shared in proportion to participation; the chimpanzees of the Taï Forest (Ivory Coast) are the best-known example (Boesch and Boesch 1989, Boesch 2002, Brinck and Gärdenfors 2003, Newton-Fisher 2015). When hunting for red colobus monkeys, the Taï chimpanzees adopt various strategies: following the prey at a distance; chasing the prey, trying to capture it; putting themselves in the prey’s anticipated path. These strategies require varying levels of expertise, and take up to twenty years to learn, and there is evidence that chimpanzees take each other’s level of expertise into account, for instance, in deciding whether to join a group hunt.
On the face of it, this may seem a neat example of cooperation involving division of labour, and that is how Boesch and colleagues present it, referring to the various strategies as “roles” (note that this is a normative term). But the practical reality is not so neat: while the hunt is in progress, bystanders may join in at any moment and participants may leave or change strategy as they see fit, and it is possible that strategies are chosen just to maximise individual hunting success; all of which makes the term “role” seem less appropriate (Gilby and Connor 2010). But most importantly, for our purposes, chimpanzees’ ways of initiating group hunts are opportunistic. Chimps usually decide to hunt when encountering prey in the course of everyday foraging or travelling, and although Táï chimpanzees show evidence of actively searching for prey, it is unclear how such searches are initiated.

Presumably, it is because of a lack of effective communicative strategies for initiating group hunts that episodes like the following have not been reported in the literature. Having strayed from his day group, a chimpanzee happens on a troop of red colobus monkeys, and decides to go back to recruit a hunting party. After a ten-minute walk he finds his companions, and proceeds to invite the most skilled hunters first. Having secured their agreement, he invites the others, and then he leads the group to their prey.

Such episodes aren’t observed in chimpanzees, and as with consortships, a form of communication that enables commitment sharing would support less opportunistic and more versatile ways of initiating joint activities, in this case group hunts. Moreover, it might help to improve the hunting itself. As we have seen, depending on their hunting skills, chimpanzees employ a variety of strategies, which each applies as he sees fit. Using communication for future coordination, these strategies might serve to define roles, to be assigned in advance, and reassigned during the hunt if and when the need arises. In this way, human-style communication supports normative practices of dividing labour, which so many of our social interactions depend on.

Thus, consortships and group hunting are settings that may have supported the transition from chimp-style communication to hominin discourse, which made it possible to coordinate future interactions. There are more such settings, like collective foraging, border patrols, cooperative breeding, and social play, for example. I singled out consortships and group hunting because in these cases it is relatively easy to see that allowing for a spatio-temporal distance between the communicative exchange and the projected activity may contribute to making the latter more profitable, and more likely to happen in the first place. It remains to be investigated whether the same holds for other joint activities that chimpanzees engage in or that early hominins may have engaged in.
3. The bigger picture

We now have a four-stage model of the transition from chimp-style communication to basic human discourse. Stage one, the baseline, is represented by modern chimpanzees, who have fairly sophisticated modes of communication, but don’t use them to coordinate their future activities. Stage two sees the introduction of echoing (or some other device) for the purpose of signalling agreement. The first form of normativity enters at stage three, as failure to engage in the projected activity becomes liable to sanctioning. Finally, at stage four, language-involving normative behaviours begin to be used for upholding commitments, with meta-talk being a particularly notable development.

Let us now step back to look at the bigger picture. On the view adopted here, human discourse is a form of coordinated interaction whose core purpose is to coordinate our future interactions (Grice 1975, Clark 1996, Geurts 2019a,b). The scenarios discussed in the foregoing were special cases in which communicative exchanges served to agree on joint activities, but the varieties of coordination are legion. Consider promises, for example:

A: I’ll do the dishes.
B: Great, thank you.

Here A undertakes to do the dishes, B signals that she accepts the offer, and as a consequence of this brief exchange A is responsible for doing the dishes while B is entitled to act on the assumption that B will do the dishes.

Or take assertions:

A: I am out of petrol.
B: There is a garage around the corner. (Grice 1975: 32)

In this discourse, B undertakes to help A by asserting that there is a garage around the corner, as a consequence of which B becomes committed to the truth of the proposition that there is a garage around the corner. Even if it is common ground between A and B that they will never see each other again, B’s commitment constrains the ongoing discourse. For example, if A says, “I thought that garage was closed”, B is not entitled to ask, “What garage?”, and if that’s how she responds nonetheless, A is entitled to be peeved. In this and other ways, B’s assertion functions to coordinate her communicative interactions with A.

These examples illustrate that human discourse is generally a form of coordinated action that enables us to coordinate our actions, but moreover, they point to an essential feature of human-style coordination: it is normative to the core. Although incipient forms of normative behaviour are observed in non-human species, it is only in our genus that normativity has come to be woven into the very fabric of social interactions, communication included.
Normativity is a style of behaviour that stabilises our behavioural patterns, thus enabling us to coordinate our interactions over large tracts of time and space. Normative behaviours started small and simple, but eventually they enabled us to regulate our interactions on a vast scale and in staggeringly complex ways. Synchronically, discourse depends on our normative behaviours, and the converse holds true as well. Diachronically, our distinctive forms of communication co-evolved with our distinctive forms of normativity.

Although this view on human communication is firmly rooted in the philosophy of language and theoretical pragmatics, thus far it hasn’t played much of a role in the literature on evolutionary pragmatics. That literature has been dominated by quite different ways of conceptualising what people do when they talk with each other, and in the remainder of this section I will compare and contrast mine with some of these alternative ways of thinking.

To begin with, there is a popular notion that communication in general is information exchange, of which human discourse is just a special case. This is how dictionaries define “communication”, and it is the default in evolutionary theories, too (Millikan 2005, Skyrms 2010, Smith 2010). I don’t doubt that this view is correct, but that is not saying much, because, no matter how you define “information”, it is such a general notion that even synaptic pulses count as information (Planer and Godfrey-Smith 2020). This generality is a strength as well as a weakness. On the one hand, it makes it possible to account for similarities between otherwise very different phenomena. On the other hand, it imposes hardly any constraints on pragmatic theories: the mere fact that communication is information exchange tells us next to nothing about what it is and how it works. By the same token, it imposes hardly any constraints on evolutionary pragmatics.

What is needed is a less abstract perspective on communication. For this we can look to interactions and relations between interlocutors, which is what I am doing here; or we can adopt an individualist stance, and look to the abilities and attitudes of interlocutors (Sperber and Wilson 2002, Tomasello 2008). Individualism is rife in pragmatics and its neighbouring disciplines. Individualist theories focus on the psychology of social agents in general and speakers in particular, with special emphasis on their “mindreading” abilities, central to which are the ability to attribute mental states such as intentions and beliefs. On this view, human discourse is a matter of expressing and recognising mental states. For example, if A makes a promise to B, then A expresses an intention, and communication is successful if and only if B recognises that intention.

This type of account presupposes that the ability to attribute beliefs and intentions is a necessary requirement for sapient communication, which is controversial. On the developmental level, the question is how children acquire
such attributive abilities before they begin to communicate successfully with promises, assertions, questions, and so on. The same question arises with respect to the evolution of communication: how did our ancestors acquire the capacity to attribute mental states before they began to communicate with speech acts? As things currently stand, both questions remain wide open. (For further discussion of these issues, see Breheny 2006, Arundale 2008, Geurts 2019c, and Geurts et al. 2019.)

Still, there can be no doubt that speakers’ utterances contain information about their mental states, which hearers are sensitive to at least some of the time. But nor can it be doubted that speakers’ utterances create commitments, which hearers are entitled to act upon. Therefore, both the individualist and the relational view highlight aspects of communication that are real and important, while differing about their relative importance. On the view adopted here, interactions and relations between individuals are the principal ingredients of pragmatic theory, but this is not to deny the relevance of mental-state attribution at all. On the contrary, the relational view allows for the possibility that mental-state attribution is rife at least in adult exchanges, though not necessarily in more basic forms of discourse, and moreover, it offers at least part of an explanation of mental-state attribution in discourse.

To explain, consider promises. If Fred promises Wilma to do the laundry, he undertakes a commitment to do the laundry. This is the main effect of Fred’s utterance, and it doesn’t require mental-state attribution on either Fred’s or Wilma’s part. Still, Fred’s promise may license pragmatic inferences about his mental state. For, assuming that Fred’s speech act was cooperative, Wilma is entitled to infer that Fred intended to become committed to do the laundry, and that he intends to do the laundry. Hence, mental-state attributions that are characteristically associated with speech acts come out as conversational implicatures: pragmatic inferences based on the assumption that the speaker is cooperative (see Geurts 2019a for details).

Thus, the relational frameworks offers an account of how mental states come to be associated with speech acts, without supposing that mental-state attribution is a necessary requirement for communication. This explains how children can have a basic understanding of promising, say, without understanding that promises express intentions, and by the same token the relational view allows for the possibility that our ancestors developed a distinctively hominin style of communication before they started to attribute beliefs and intentions to one another. Indeed, it invites the hypothesis that the practice of attributing beliefs and intentions was enabled by linguistic communication; in Geurts (2020) this hypothesis is fleshed out in detail.
Conclusion

While chimp-style communication is already a complicated affair, human discourse is inconceivably complex by comparison. How are we to tackle the formidable task of building an evolutionary bridge from one to the other? I have proposed to take the approach that, to my mind, is the most natural and obvious, which is to focus on the most basic forms of human discourse and the most human-like forms of chimp-style communication. When this approach is adopted, it soon becomes clear that a, if not the, core function of both communication styles is to coordinate interactions between individuals, though, as one would expect, human discourse is a lot more powerful in this respect. The model I propose to explain the difference highlights two parameters that gradually acquired higher values in humans than in non-humans: responsiveness and normativity.

The proposed model is a pragmatic one not only in the sense that it concentrates on language use rather than language as a medium, but also in that its linguistic requirements are modest. For the most part, chimp-style signals would suffice to support the developments it hypothesises; it is only in the last stage, when language-involving forms of normative behaviour begin to be used, that the expressive power required from the medium exceeds that of non-human communication systems, but even then the difference is quite small. Therefore, my account is consistent with the hypothesis that a distinctively human style of communication evolved before language.

References


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A pragmatic aspect of communication. Kanlybaeva Zh. S., Abylai khan Kazakh University of International Relations and World Languages. Presentation of the language not only as a strict structural system of language units and relationship between them, but as a means of communication has given the foundation to widen borders of linguistics objects as well. This means that an act of communication is a component of communicative act and it depends on other components of intercourse. Certainly "interactional view" of human communication, pragmatics can be understood in terms of some general principles. Such ones are suggested by Fisher B.Aubrey. Within the field of evolution, evolutionary psychology serves a particularly transparent role in putting people and ideas you don’t like in their place. So along comes evolutionary psychologist Dan P. McAdams of Northwestern university, in an op-ed in the British newspaper The Guardian. He says Trump can be analyzed as an alpha male chimpanzee, a legacy of our evolutionary cousinship with chimps. This was so predictable. I’m kicking myself for not predicting it. The piece writes itself. The curious case of Donald Trump shows that human beings turn out to be a lot like chimps. In the wild and Through an analysis of chimpanzee-human discourse, we show that two Pan troglodytes chimpanzees and two Pan paniscus chimpanzees (bonobos) exposed to a humanly devised symbol system use partial or complete repetition of others' symbols, as children do: they do not produce rote imitations, but instead use repetition to fulfill a variety of pragmatic functions in discourse. These functions include agreement, request, promise, excitement, and selection from alternatives. In so doing, the chimpanzees demonstrate contingent turn-taking and the use of simple devices for lexical cohesion. In short, th