Common ground – aka “common knowledge”, “mutual knowledge”, “shared knowledge”, “assumed familiarity”, “presumed background information”

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Introduction

Human language is characteristically a form of social interactive behaviour. It may occasionally have other functions, but the motivation for its coming into existence (see Dunbar 1996, Allan 2003) and by far the majority of its usage is when S (speaker, writer, signer) addresses utterance U to audience H for an unbounded number of perlocutionary and illocutionary purposes such as to establish or maintain a social relationship, to inform, question, demand, warn, apologize, and so forth. S and H are mutually aware that, normally, their interlocutor is an intelligent being. S does not need to spell out those things which are obvious to the sensory receptors of H, or such that H can very easily reason them out using the knowledge that each of us develops from birth as we experience the world around us on the basis of communicative competence (knowing the language and the conventions for its use). These constitute common ground (CG). Our understanding of linguistic utterances rests on an assumption of CG: e.g. when S points to something visible in the situation of utterance and says Isn’t that nice? there is an assumption that H understands English and can also see it; saying Let’s go to Brisbane assumes that “Brisbane” will be understood as referring to a certain city. Some CG is universal, e.g. knowledge of the sun as a heavenly body that is a source of light and warmth, rain as (among other things) a source of fresh water replenishing the earth, the physiological and socio-cultural differences between the sexes. Some CG is very restricted, e.g. between a couple who use the wicked witch to refer to the man’s second wife. Usually S can readily assess the probable CG with H, and chooses his or her words accordingly. This requires S to make assumptions about H’s capacity to understand U well enough that S’s expressed intention in the message is, in S’s opinion, more or less correctly interpreted by H (Allan 1986, Lasersohn 1999, Colston 2008: 173). S’s assumptions here are S’s estimates of the CG between S and H with respect to U; this is not something S is normally conscious of except, perhaps, when communicating with a stranger – and not often then. Assumed CG is based on an assessment of H’s competence to understand U, and it motivates such things as choice of language and language variety, style and level of presentation – because, for instance, addressing a neophyte or a child must be differently handled from addressing a group of experts. CG allows meaning to be
underspecified by S, so that language understanding is a constructive process in which a lot of inferencing is expected from H.

These are linguistic aspects of CG and there must also be assumptions about what H may know of the world, which can affect the choice of utterance topic, and even whether or not S should address H at all. H also makes assumptions about the CG with S, basing it on H’s assessment of U in the context of utterance and of S as a person. S’s assessment of CG with H and H’s assessment of CG with S are unlikely to be identical: all that is required is that the overlap in S’s and H’s assessments of mutual CG enables S to be satisfied that H understands U well enough for S’s communicative purpose to, in S’s judgment, succeed. This will apply to each utterance in a discourse such that the relevant CG is dynamic and typically accretes. As conversation proceeds the CG develops (Stalnaker 2002: 701): if, where A, B, and C are interlocutors, A says $\varphi$ and B says $\chi$ then, normally all of A, B and C (keeping score in terms of Lewis 1979) will know that A either subscribes to or purports to subscribe to $\varphi$ and B to $\chi$, whether or not the other interlocutors also subscribe to $\varphi$ and $\chi$. Furthermore, in a talk exchange, the roles of S and H will alternate among interlocutors. The situation is again complicated by the fact that, when uttering U, S will often address more than one person and so is required to assess CG with an audience of any number of people.

This essay continues with a discussion of terms and concepts very similar to if not identical with CG; the third section examines definitions of CG; the fourth applies my preferred definition of CG to three texts; to conclude there is a summary of the findings.

By any other name

What I am calling CG is sometimes referred to using other labels. For instance in Allan 1986 I referred to it as “context”. Duranti 1997: 27ff includes sensitivity to cultural and procedural knowledge as aspects of “contextualization” (cf. Gumperz 1982: 131), later pointing out that speakers design their speech according to their on-going evaluation of their recipient as a member of a particular group or class. […] And] speakers change the content of what they say depending on whom they identify as their primary recipient. (Duranti 1997: 299f. His italics.)

This is a reaction to S’s perception of CG with H. S must be capable of presenting different material to different audiences according to the task to which U is put in such a way as to (try to) hold audience interest. S will often modify CG by presenting (acting out) a persona taking a certain stance on what is being said (revealing S’s footing, in terms of Goffman 1981: 128) and may present as not only the animator, but also the author and principal – or not – of what is said in U (ibid. 145, 167, 229). This is one means by which S can manipulate the CG.
CG, or a part of it at least, constitutes what Lewis 1969: 56ff referred to as “common knowledge” within a population, a term adopted by Stalnaker 1973 who comments: “this background of knowledge or beliefs purportedly shared by the speaker and his audience constitute the presuppositions which define the context” (p. 448). Presuppositions are relevant to CG: S might be said to presuppose some CG with H and vice versa; but although presuppositions constitute a part of CG, there is more to CG than them alone. I shall return to presuppositions characterized as “preconditions on illocutions” when defining CG. Abbott 2008 correctly asserts that items may be introduced into common ground if they are noncontroversial, as in Grice 1981: 190:

For instance, it is quite natural to say to somebody, when we are discussing some concert, *My aunt’s cousin went to that concert*, when one knows perfectly well that the person one is talking to is very likely not even to know that one had an aunt, let alone that one’s aunt had a cousin. So the supposition must not be that it is common knowledge but rather that it is noncontroversial, in the sense that it is something that you would expect the hearer to take from you (if he does not already know).

Lewis 1979: 340 spoke of H “accommodating” to such introductions. I see this as a predictable part of a personal relations frame or schema (compare that waitpersons, tables, and food are part of a restaurant frame and script).

Lewis’s “common knowledge” is essentially similar to Schiffer’s “mutual knowledge*1*, described as follows:

For example, all “normal” people know that snow is white, know that all normal people know that snow is white, know that all normal people know that all normal people know that snow is white, and so on *ad infinitum.*

(Likewise, I should think, for all or most of our common general knowledge; so if S and A mutually know* that each is “normal”, all of the general knowledge that each has in virtue of being a “normal” person will also be mutually known* by them.) (Schiffer 1972: 32)

As Schiffer recognized, an intractable problem with “mutual knowledge*” is that it is infinite; in other words both S and H will be processing an utterance *ad infinitum* – which is obviously contrary to fact. This problem has been resolved on an ad hoc basis by arbitrarily limiting the number of recursions to three or four on the basis that both Schiffer 1972 and Lewis 1969 claim that the infinite recursion only applies to the theoretical chain of implications and not to its practical application in cognitive processing. This seems to me a fudge and, as we shall see, it is also possible to dispense with the problem altogether.

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1. Schiffer uses the asterisk to mark the phrase a term of art. Schiffer 1972: 131 makes explicit the essential similarity between “common knowledge” and “mutual knowledge*” though it is sometimes claimed (e.g. on http://www.gametheory.net/dictionary/MutualKnowledge.html) that “common knowledge” lacks the recursive aspect of “mutual knowledge*” described immediately below.
Just as Lewis 1969 assumes that “common knowledge” implicitly defines a community (group) wherein the knowledge is common, so does Schiffer 1972:131 explicitly assign this property to “mutual knowledge*”. The identification of community is a relevant aspect of CG; as Enfield 2008: 235 writes: “The management of common ground is directly implicated in our perpetual attendance to managing personal relationships within our social networks”.

“Shared knowledge refers to knowledge that is possessed by all interlocutors; whether the interactants are aware of each other’s awareness of this state is not relevant” (Holtgraves 2002: 125). However, Prince 1981: 230 does not agree:

[Givenness in the sense of ‘shared knowledge’ may be described as follows: Givennessₙ: The speaker assumes that the hearer ‘knows,’ assumes, or can infer a particular thing (but is not necessarily thinking about it).

In a remark that applies also to mutual knowledge* with its runaway recursion, Prince then rejects “shared knowledge” on grounds that it “is taking the position of an omniscient observer and is not considering what ordinary, nonclairvoyant humans do when they interact verbally” (Prince 1981: 232); she prefers “Assumed Familiarity” (233) which she further divides into seven categories that are not germane to this essay.

Following Grice 1981: 190 (= Grice 1989: 65) Stalnaker referred to “common ground”, described as “presumed background information shared by participants in a conversation” (Stalnaker 2002: 701) or “what speakers [take] for granted – what they [presuppose] when they [use] certain sentences” (ibid. 702). What seems abundantly clear is that although one might educe differences among them (see Lee 2001), the terms common knowledge, mutual knowledge*, shared knowledge, assumed familiarity, presumed background information and common ground are describing essentially the same thing: the most significant pragmatic constituent of communicative competence. Communicative competence is the knowledge and application of how and when to use utterances appropriately that combines with grammatical knowledge (of semantics, syntax, morphology, phonology) in the production of utterances to generate a coherent text comprehensible to its intended audience.

**Towards a definition of common ground**

Stalnaker defines CG thus:

To accept a proposition is to treat it as true […] It is common ground that \( \varphi \) in a group if all members accept (for the purpose of the conversation) that \( \varphi \), and all believe that all accept that \( \varphi \), and all believe that all believe that all accept that \( \varphi \), etc. (Stalnaker 2002: 716.)

Stalnaker rightly adds temporary assumptions, probable presumptions, and pretended beliefs to what is mutually known as a potential part of CG. He points out that X may believe of Y that Y mistakenly believes that \( \varphi \) is a common belief, while X does not (ibid. 708). Colston 2008: 160
allows for false beliefs where because φ is said to have been previously spoken of or done in X’s presence, X may come to falsely believe that φ occurred, even though it did not. However, in Stalnaker’s definition there is the unsatisfactory infinitely recursive definition taken over from Lewis’ “common knowledge” and Schiffer’s “mutual knowledge*”. It is adopted with minor changes by Kecskes and Zhang 2009 without amending or mitigating this fatal flaw – fatal, because (as I have said) it requires that for both S and H an utterance is processed ad infinitum, which is contrary to fact.

Clark 1996 Ch.4 describes and defines CG, basing it on a presumption of awareness (p. 93f): X is aware of the world around him/her and is aware of being aware of it, i.e. X is not asleep, in a coma, stoned out of his/her mind, or the like. X is also aware that an interlocutor Y is aware in a similar way to X; likewise for Y in respect of X. The shared basis for mutual awareness is not a sharing of exactly identical facts and suppositions, but there will be a substantial overlap. Clark’s account of shared CG (Clark 1996: 94f) can be paraphrased as in (1).

(1) (i) Every member of community K is aware that B (the basis for believing a set of propositions) holds true.2
(ii) B indicates to every member of K that every other member of K is aware of B.
(iii) B indicates to every member of K that φ.
(iv) φ is common ground in K.
(v) [Reflexive common ground:] Every member of K has the information that φ and that (v).

The awareness condition is applicable to all human interactive behaviour and not especially relevant to the linguist’s definition of CG. Although (1)(v) appears to side-step the recursion ad infinitum which vitiates Schiffer’s “mutual knowledge*” and Stalnaker’s definition of CG (as well as that of followers like Kesckes and Zhang), it nonetheless creates an endless loop by recalling itself.3 Clark’s “principle of justification” seeks to avoid the recursion and looping problems with CG:

In practice, people take a proposition to be common ground in a community only when they believe they have a proper shared basis for the proposition in that community. (Clark 1996: 96)

2. In other words, B is a certain state of affairs that is held to be true/accurate/correct/factual.
3. Clark (pc, July 2011) disputes this objection (see also Clark 1996: 100) claiming that 1(v) is simply self-referring on a par with This sentence contains five words. Pace Herb, but I maintain that 1(v) calls itself such that it generates unbounded recursion: Every member of K has the information that φ and that every member of K has the information that φ and that every member of K has the information that φ and that every member ....
However, this fails to specify the grounds for belief in a shared basis for $\phi$, which take it back to the procedure in (1). The only recourse is to revise (1).

Allan 2001: 21 suggested a revised definition of CG which is slightly ameliorated in (2).

(2) Common ground for any community $K$ of two or more people that include $S$ and $H$ is that:

(a) every member, or almost every member, of $K$ knows or believes some fact or set of facts $F$; and

(b) typically, a member is presumed to know or believe $F$ by (almost) every other member of $K$; and

(c) typically, a member of $K$ knows that both (a) and (b) are true.

When a member of $K$ applies knowledge of $F$ in order to interpret $P$, a state of affairs or something said, s/he can presume that others in the community will also apply (or be able to apply) knowledge of $F$ in order to interpret $P$. The existence of $F$, $P$, and the application of knowledge of $F$ to interpreting $P$ is common ground for members of the community $K$. Once attended to, $P$ is added to $F$, incrementing the common ground.

The “community $K$” referred to in (2) may consist merely of people who chance to be interlocutors on a given occasion having in common an intention to communicate with each other using a language of which neither of them have to be fluent speakers but which entails some cultural and historical heritage to which they have access. Most often, however, $K$ satisfies the usual conditions for community in that its members share a common language of which they are native or native-like speakers, they share a common cultural and historical heritage, and are located in a specific locality. “Consensus is fundamental to defining cultural communities” (Clark 1996: 105) and (2)(c) owes something to Lewis’s definition of convention (Lewis 1969: 78). Each of (2)(a) and (2)(b) is common knowledge in $K$, and therefore so is (2)(c). $F$ includes not only behaviours but also manifest facts such as what can be seen, heard, smelt, etc. by the interlocutors. Included among $F$ are “schemata” (Bartlett 1932, Mazzone 2011), “frames” (Minsky 1977; Fillmore 1982), “scripts” (Schank and Abelson 1977; Schank 1984), “scenarios” (Sanford and Garrod 1981), and “Assumed Familiarity” (Prince 1981) – all of which capture the fact that our brains look for, detect, and store structured patterns of information that constitute part of “common knowledge” in the sense of Lewis 1969 and Schiffer’s “mutual knowledge*”. On most if not all occasions $P$ is effable: it can be expressed in a proposition or set of propositions $\phi$. I have less confidence that $F$ is always effable, but mostly it is. Note that (2)(a) and (2)(b) allow for a member $M_i$ of $K$ to not know or not believe

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4 $P$ becomes part of CG irrespective of whether either $S$ or $H$ take it to be true. Note that when $P$ is added to $F$, incrementing CG, it creates a new set that properly includes $F$ but which is then, mutatis mutandis, functions the same way as $F$ did.
F, permitting miscommunication to arise. For instance, if X says *I’ve just been talking to Kim* and Y responds *Kim who?* then X is expected to explain who Kim is. Sometimes S assumes something is not in CG with H, when in fact it is. As a rule H corrects S.

Lee 2001 describes empirical data from the Map Task of Brown 1995 in which two interlocutors are given slightly different maps (which the other cannot see), one being identified as an update of the other. Lee discusses what seems to be taken as CG when X guides Y through a route on the map. A plausible story for CG between two “ordinary, nonclairvoyant humans” (to quote Prince again) is shown in (3), adapted from Lee 2001: 38.

(3)  

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Y     Y/X    Y/X/Y  
X: you start below the palm beach right     CG    CG
Y: right                                                        CG    CG      CG
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The topmost CG under Y indicates that Y assumes “the palm beach” is on Y’s map, Y can identify the unique “palm beach” accurately because it is in plain sight. The sister CG under Y/X assumes that Y recognizes that X assumes the palm beach (B) is on Y’s map, because that is entailed by X’s utterance. Y’s answer “right” confirms that B is on Y’s map and thereby confirms that Y recognizes that X assumes B is on Y’s map. Additionally the CG under Y/X/Y indicates that Y recognizes that X believes that Y recognizes that B is on Y’s map. No further recursion seems warranted. Based on many instances of data like (3), Lee notes that Brown 1995: 227 cannot see grounds for requiring more than just the three steps of recursion demonstrated in (3), and introspection surely confirms the accuracy of this. I note that there is a parallel here with Grice’s notion of “reflexive intention” (Grice 1957, 1968, 1969); although Grice later modified this first to an “iterative intention” and then a “sneaky intention” (in Grice 1982) he had no need to do so, it was always satisfactory (see Bach 2012). Reflexive intention can be characterized as S’s intention to have H recognize that when uttering U in context C, S intends to have a certain effect on H partly caused by H recognizing that S has the intention to communicate with S by means of U. The analogy with respect to CG is that when S mentions φ in U, S intends H to recognize φ and, furthermore, that H comprehend that S intends that H recognize φ as a result of S uttering U in context C. Hence in (3), Y’s “right” means ‘I start below the palm beach that you, X, have mentioned as probably being on my map and that I recognize as in fact being on my map as you, X, anticipated (which is why you, X, mentioned it)’.

How does this analysis square with the definition of CG in (2)? In (3) community K consists of just X and Y. Among the set of facts F are that each is aware that the other has a map before them and that these maps are different in that one has been identified as an update of the other. The task is a map-reading scenario with a journey script evoked. P in (2) is realized by each clause of each utterance in (3).
Missing from (3) is what X has in mind; after all, CG is what is common to both Y and X. So let’s tackle the analysis differently from Lee 2001. What X says (“you start below the palm beach”) pragmatically entails that (a) X believes that Y has B on Y’s map and that Y can confirm (or deny) this supposition (“X: … right”) and (b) Y will assume that X believes that Y has B on Y’s map and that Y can confirm (or deny) this supposition. What Y says pragmatically entails that (a) Y confirms that B is on Y’s map and that X’s supposition was correct and (b) X may assume that X’s supposition was correct because B is on Y’s map and that Y can therefore “start below the palm beach”. No further recursion is needed.

Generalizing over this analysis we get (4):

(4)  
i. X saying φ to Y pragmatically entails that (a) X believes that φ and (b) Y has some reason to believe that X believes that φ.

ii. If in saying φ to Y, X refers to α, this act of referring to α pragmatically entails that (a) X believes Y can identify α (knows who or what α is) and (b) Y recognizes that X believes Y can identify α. Typically, when Y cannot identify α, Y asks X for further information.

The description in (4) is reminiscent of the preconditions on a felicitous statement (see e.g. Austin 1962, Searle 1969, Bach and Harnish 1979, Karttunen and Peters 1979, Allan 2001, 2006) which correspond to speaker presupposition and justify to some degree the views of e.g. Stalnaker 1974, 1978, 2002, Kecskes and Zhang 2012. There is more to CG than speaker presupposition, however, because CG must also take the beliefs of H into account.

**Analysing common ground**

In this section I analyse CG in one invented text, one fictional text, and one non-fictional text. The invented text is (5).

(5)  
A male colleague, X, turns up late for a meeting and on entry immediately says *I’m sorry, my car broke down.*

In terms of the definition in (2), the words uttered (in italics) constitute P and the stage direction constitutes part of F. The following aspects of CG in (5) also comprise components of F.

(5A)  
In most Anglo societies (and many others) the situation, turning up late at a meeting, is impolite and so typically demands an apology (part of a meetings script). K(5) is such a community. “I’m sorry” satisfies this social constraint in K(5).

(5B)  
To explain away an offense mitigates face-loss and that is why X will normally be understood to be apologizing for being late, not for the fact that his car broke down. That is, mention of

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5. If A pragmatically entails B, B cannot (given A) be denied without creating a paradox, absurdity, or contradiction.
the car break-down is intended to explain away X’s being late on the ground that in $K_{(5)}$ car-break-downs disrupt journey schedules by extending journey times (sometimes blocking journey completions altogether). This is part of a car-break-down script.

(5C) Even if none of X’s colleagues knew he was coming by car, X does not have to spell this premise out because in most Anglo societies travel by car is a common means of transport; knowledge of this fact is part of CG within that community. Let’s assume that (5) is felicitous because it is located in such a community ($K_{(5)}$).

The mundane enrichment of what is said on the basis of CG rests upon knowledge of social and cultural conventions and the cognitive principles that govern our thinking, all of which need to be accounted for in a linguistic theory of utterance meaning.\(^6\)

Note that the felicity referred to in (5C) above is unaffected by whether or not X is telling the truth; if X were lying in (5), that would present another kind of infelicity not relevant to our interest in the CG in (5). (5) would be infelicitous if it were known to some H in the audience that X could not possibly have travelled any part of his journey by car, whether his own or someone else’s; were that the case, (5C) would not be common ground between H and X, rendering (B) inapplicable for H. That is to say: (5B) might be common ground between H and X but it would not apply in (5), putting H in a position to castigate X as a liar.

I now want to take a look at two written pieces to try and elicit the author’s assumptions about common ground and the consequences for a reader. (6) is from a celebrated novel.

(6) I had a room and a half on the seventh floor at the back. The half-room was an office split in two to make reception rooms. Mine had my name on it and nothing else, and that only on the reception room. I always left this unlocked, in case I had a client, and the client cared to sit down and wait.

I had a client.

[Chapter 11]

She wore brownish speckled tweeds, a mannish shirt and tie, hand-carved walking shoes. Her stockings were just as sheer as the day before, but she wasn’t showing as much of her legs. Her black hair was glossy under a brown Robin Hood hat that might have cost fifty dollars and looked as if you could have made it with one hand out of a desk blotter.

‘Well, you do get up,’ she said, wrinkling her nose at the faded red settee, the two odd semi-easy chairs, the net curtains that needed laundering and the boy’s size library table with the venerable magazines on it to give the place a professional touch. ‘I was beginning to think perhaps you worked in bed, like Marcel Proust.’

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6. The “cultural scripts” of Goddard and Wierzbicka 2004, Goddard 2006 may be relevant here.
‘Who’s he?’ I put a cigarette in my mouth and stared at her. She looked a little pale and strained, but she looked like a girl who could function under a strain.

‘A French writer, a connoisseur in degenerates. You wouldn’t know him.’

‘Tut, tut,’ I said. ‘Come into my boudoir.’

She stood up and said ‘We didn’t get along very well yesterday. Perhaps I was rude.’

‘We were both rude,’ I said. I unlocked the communicating door and held it for her.

(The Big Sleep, Chandler 1939)

The raconteur is Philip Marlowe, financially challenged Los Angeles private detective. The woman is Mrs Vivian Regan née Sternwood, daughter of a millionaire. They had previously met in the mansion of her father for whom Marlowe is working and they had been mildly rude to each other; this is remembered as CG in the two final paragraphs of (6). Obviously S’s apprehension of CG with H relies on S’s long-term and short-term memory (Horton and Gerrig 2005) and I will discuss the importance of memory in more detail later. The descriptions of Marlowe’s office in (6) depict it as small and dingy. A reader’s experience of visiting such dingy offices is skilfully evoked and introduced into CG by author Chandler with the rather tongue-in-cheek “net curtains that needed laundering and the boy’s size library table with the venerable magazines on it to give the place a professional touch”. The final sentence of the first paragraph “I always left this [door] unlocked, in case I had a client, and the client cared to sit down and wait” hints that clients did not always care to sit down and wait. The description of Mrs Regan is of a smart, well-dressed woman. The reference to her legs recalls Marlowe’s earlier impression of her, in chapter 3: “I sat down on the edge of a deep soft chair and looked at Mrs. Regan. She was worth a stare. She was trouble. She was stretched out on a modernistic chaise-longue with her slippers off, so I stared at her legs in the sheerest silk stockings. They seemed to be arranged to stare at. They were visible to the knee and one of them well beyond. The knees were dimpled, not bony and sharp. The calves were beautiful, the ankles long and slim and with enough melodic line for a tone poem. She was tall and rangy and strong-looking.” Again, author Chandler is establishing CG with a reader: the description of Mrs Regan renders her attractive and handsome but not sexy as in a romance – there is no reference to her face or bosom as one might find in a Mills and Boon novel. Consequently, the casting of Lauren Bacall to play Mrs Regan in the film of The Big Sleep7 was perfect; Marilyn Monroe would have been entirely inappropriate (though MM could have been appropriately cast as Vivian’s sister Carmen). These comments about the film of the novel are only tangentially relevant to the CG in (6): they are relevant as one reader’s development on that part of the CG in (6) which established

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7. Directed by Howard Hawkes, starring Humphrey Bogart and Lauren Bacall. 1946, Warner Bros. In the film, scripted by William Faulkner, Leigh Brackett and Jules Furthman, Vivian Regan was renamed Vivian Rutledge. Her sister Carmen was played by Martha Vickers.
the appearance and character of Mrs Regan. H may legitimately increment what S presents as part of the CG in U beyond what is shared with S. This appears to directly conflict with a claim made by Clark and Carlson 1981: 328 that “the comprehension process must keep track of common ground, and its performance will be optimal if it limits its access to that common ground. Whether its design is actually optimal in this respect is a question that can only be answered empirically.” As shown here, the empirical answer is surely negative, a conclusion that does not conflict with the view of Clark, Schreuder and Butterick 1983 that the search for referents is restricted to entities in CG. That is correct, as we shall see in the discussion in (7) below of the reference to Proust in (6).

The description of Mrs Regan’s hat ($50 in 1938 would be close to $800 today) shows that Marlowe thought it hugely overpriced and perhaps ugly (“looked as if you could have made it with one hand out of a desk blotter”). Her reaction to his dingy office, “wrinkling her nose”, is thereby put into context. Common ground with the reader thus far is along the following lines: a private detective is expected to have some kind of office; Marlowe’s business is not flourishing and this is consistent with his office being small and dingy. Mrs Regan is wealthy and elegant; although slightly troubled (“She looked a little pale and strained”), she has earlier been described as “strong-looking” and is here designated “like a girl who could function under a strain”. The banter with Marlowe should therefore be no surprise to a reader. Mrs Regan has been kept waiting and so chides Marlowe for being late into the office: “Well, you do get up [...] I was beginning to think perhaps you worked in bed, like Marcel Proust.” This is a jibe and a display of culture which is apparently lost on Marlowe: a lack of CG between them. She rectifies it with a slightly dismissive identification of Proust as “a connoisseur in degenerates”, and her put-down of Marlowe in “You wouldn’t know him.” This last is interesting: had she earlier supposed that Marlowe would not know of Proust, why did she bother to name him? We might (correctly) say that Vivian Regan is a pawn of the author and it is Raymond Chandler who names Proust to engineer this display of social disparity between Mrs Regan and Marlowe. However, it would also be in character for Mrs Regan to name Proust simply because of his reputation for working from his bed. When Marlowe reveals his ignorance of Proust it allows her to insult him such that “You wouldn’t know him” has the force of I should have known you wouldn’t know who Proust was. Marlowe’s response is to tut – but at what? His own ignorance or the “connoisseur in degenerates”? It remains ambiguous. But his flippant “Come into my boudoir” in place of Come into my office is primed by the mention of “French” and, perhaps, the noun “degenerates” which is part of the CG with his addressee. He is understood by Mrs Regan (R) who accedes without comment. As I have said, the two final paragraphs demonstrate remembered common ground: R offers a rapprochement by admitting to have perhaps been rude; bringing it up voluntarily counts as an implicit apology based on social custom (part of CG). Marlowe’s (M’s) response accepts the attempt at reconciliation by admitting
his own fault. Although this is fiction there is clearly a limitation on recursion. For convenient discussion, part of the conversation between R and M is repeated in (7).

(7)  
R1: … Marcel Proust [α]
M1: Who’s he?
R2: A French writer, a connoisseur in degenerates.
M2: Tut, tut.

(7)R1 pragmatically entails that (a) R believes α is known to M and (b) M recognizes that R assumes α is known to M. (7)M1 pragmatically entails that (a) M does not know α and asks R to identify α and (b) R recognizes α is not known to M and M assumes R can identify α for M. (7)R2 pragmatically entails that (a) R assumes that M knows nothing of α and so R identifies α for M in order to establish that α is known to M (despite the follow-up “You wouldn’t know him”); and (b) M is informed that α is a French writer who is a connoisseur in degenerates and M assumes (based on the cooperative principle) that R is speaking truthfully about α. (7)M2 pragmatically entails that (a) M accepts (7)R2 and comments on it (or his ignorance) disapprovingly and (b) R is informed that M accepts what she has said about α and that M has commented upon it (or M’s ignorance) disapprovingly. It is plain to see that there are no grounds here for positing runaway recursion in CG.

In the analysis of (7) there is a question. (8) generalizes over questions and other forms of request (though I shall not discuss these further here, see Allan 2006).

(8)  
X asking Y φ pragmatically entails that (a) X believes Y may be able to do φ and expects Y to accede or refuse and (b) Y recognizes that X believes Y may be able to do φ and Y needs to decide whether to accede or refuse.

In (7) there is an instance of the situation generalized over in (4)i., namely “If in saying φ to Y, X refers to α, this act of referring to α pragmatically entails that (a) X believes Y can identify α (knows who or what α is) and (b) Y recognizes that X believes Y can identify α. Typically, when Y cannot identify α, Y asks X for further information.” We see this played out in lines (7)R1 and (7)M1. (7)M1 and (7)R2 operate via (8): (7)R2 has Mrs Regan in the role of Y, acceding to the request in (7)M1.

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8 A reader believed (7)M1 to be denial of the pragmatic entailment of (7)R1: it is not. The pragmatic entailment is that Regan’s utterance pragmatically entails that she assumes Marlowe will know of Proust as an element of common ground. (7)M1 does not deny her assumption of such CG, but only that Marlowe knows who Proust is.

9 In this short essay I cannot explore the complexities of what it means to know (be able to identify) α.
Now consider the very different, non-fiction, text in (9). In terms of the definition in (2) each sentence in (9) constitutes a P that becomes a part of F once processed by the reader; described below are other parts of F.

(9) For twenty-three years now I’ve been floating rivers. Always downstream, the easy and natural way. The way Huck Finn and Jim did it, La Salle and Marquette, the mountain men, Major Powell, a few hundred others. (‘Preliminary Notes’ to Down the River, Abbey 1982: 1)

This is the opening paragraph of the first essay in the late American author Edward Abbey’s Down the River. We expect knowledge of the book’s title to be indicative of the book’s content and to establish CG with the reader (H); but even without recourse to the book’s title, the first sentence in (9) introduces the topic of river running and the author’s experience of floating down rivers. The implication is that the canoes, kayaks, rafts, dories or inflatables used were powered by oars, paddles, or poles and not motors. This presumption is strengthened, though not confirmed, by the second sentence: the river’s current was used as a power source. A basic knowledge of the dynamics of rivers and the running of rivers is invoked as CG with H (the reader); but H does not have to know much. The mention of 23 years suggests (based on CG with H of human life spans and contextually relevant experiences) that the author might be middle-aged (he was in fact 54) and so had considerable experience of river running. That fact is not relevant to the understanding of (9), but it is relevant to a reader’s appreciation of the book that follows.

Abbey was somewhat egocentric in his assumptions about CG with the reader. Although he had lived in Europe and visited Australia, Abbey wrote primarily for Americans with similar views to his own.10 In part this is evident from the final sentence in (9). Many readers all over the Anglo world will recognize “Huck Finn”, but the other people named are less likely to be familiar, especially to non-Americans. It is clear from context that all of them are people who floated downstream on rivers, a speculation confirmed to any reader who remembers the adventures of Huckleberry Finn and his Negro companion Jim as they floated down the Mississippi on a raft (Twain 1884). Readers who recall the character of Huck Finn may also recollect his rebelling against oppression, searching for freedom and adventure, and revelling in life in the open – traits shared with Abbey himself and many of his books. Abbey probably anticipated this would be CG with a large number of his readers. This CG is coherent with the sense of adventure and exploration of the natural environment shared with the seventeenth century explorers René-Robert Cavelier, Sieur de La Salle, and Father Jacques Marquette SJ who, like Huck and Jim, travelled parts of the

Mississippi; likewise with “the mountain men”11 – nineteenth century fur trappers and traders in the American West – and with John Wesley Powell. Major Powell, who lost half an arm in the American Civil War, was celebrated for, and wrote eloquently about, his 1869 three-month river trip down the Green and Colorado rivers, making the first recorded passage through the Grand Canyon. A reader of (9) will typically know at least a few of these facts (F, in terms of (2)) and could readily ascertain the rest from encyclopaedias during Abbey’s lifetime and, today, from the web. In other words, the interested reader (H) can readily increment CG with author Edward Abbey (S) should s/he wish to do so.

The text in (9) raises two important aspects of CG: the tendency for S to be egocentric and the importance of memory within CG. I don’t doubt the presence of egocentricity as an hindrance to cooperativeness, but I do believe that all of Keysar and Henly 2002, Keysar 2007, Kecskes and Zhang 2009 overstate the case for egocentrism in communicative discourse. Egocentrism is a function of what is severally salient to S and H whereas to seek common ground is an effortful process employing cognitive resources to incorporate beliefs about the knowledge and perspectives of other interlocutors. This view assumes conscious effort on S’s or H’s part but I would predict that, given the near constant exposure to language interchange during the waking hours of most human beings, under most circumstances S and H automatically assume that for S to get a message across in U and for H to understand U one has to put oneself into the interlocutor’s shoes (however difficult this may be in a broadcast or book); consequently, this is what we automatically do in language exchange. For instance, it enables us to correctly interpret utterances in unfamiliar accents through a sort of analysis-by-synthesis: “It seems as if listeners sometimes perceive an utterance by reference to their own motor activities. When we listen to speech, we may be considering, in some way, what we would have to do in order to make similar sounds” (Ladefoged 1982: 104). Linguistic communication in general is a matter of putting oneself into the interlocutor’s place and, because this behaviour is the norm, it very quickly becomes automatic except perhaps in those with autism spectrum disorders, or those who are severely narcissistic or very deeply depressed. Otherwise, neither S nor H needs to consciously accommodate themselves to the needs of an interlocutor; it is automatic and takes no noticeable processing effort. In the words of Horton 2008: 202: “automatic commonality assessment provides one possible basis upon which language users may generate inferences about common ground.”

Nonetheless, it is necessarily the case that what S utters is based on S’s own knowledge and perspectives (egocentricity) and these may not match H’s even though S is desirous of

11. http://www.mtmen.org/
communicating with H. We find this illustrated in (9). Even so, S will make the effort to communicate effectively with H, as we see in (10) and (11).

(10) Everything is disorganized that’s why the lights are constantly going out and the transportation is just eh- but anyway he Don Ward lives through all this. (Horton and Gerrig 2005: 29)

(11) A: Really that’s what Lawrence and one of his friends that’s what he did when he was in the service. Because he just uh you know the eh the you know how the tops of the tanks have those kind of ball bearing things

B: mhm

A: He just made sure that those ran right. (Horton and Gerrig 2005: 30)

In (10) S utters “he” but then immediately clarifies who s/he is referring to, naming “Don Ward” who is presumably in CG with H. In (11) A makes the effort to check that B has understood his reference to “those kind of ball bearing things” on the tops of tanks.

Another aspect of (9), especially its third sentence, “The way Huck Finn and Jim did it, La Salle and Marquette, the mountain men, Major Powell, a few hundred others”, is the invocation of memory. Lewis 1979: 346 writes of mental representations of a conversational scoreboard and obviously S’s apprehension of CG with H depends on S’s long-term and short-term memory and, equally, H’s understanding of U typically relies on H’s short-term and long-term memory (Horton and Gerrig 2005). This is very evident in (12) and (13) below. In (12) S can’t remember if the information is in CG already but thinks it isn’t; and in (13) A has forgotten that the information is already in CG and can be recalled by B.

(12) I got you. Yeah I’ve got another buddy who, uh, is a marine pilot. I’m trying to think if you had ever met this guy. I don’t think so. (Horton and Gerrig 2005: 14)

(13) A: My nephew’s name is Jeff McDougal

B: yeah

A: He made his vows in the Jesuits a year ago.

B: You said that.

A: I I couldn’t remember if I did or not. (Horton and Gerrig 2005: 19)

As Horton says:

[T]he claim is simply that conversational phenomena like audience design can, in many circumstances, be mediated through domain-general memory processes. Indeed, there are many situations in which relatively strategic considerations of commonality would be expected to occur, either because of the need to keep track of what information is shared or not, or because feedback from the partner triggers the need for possible monitoring and error correction. (Horton 2008: 217)
CG does rely on memory, including memories of schemata, frames, scenarios and scripts (Bartlett 1932; Mazzone 2011; Minsky 1977; Fillmore 1982; Sanford and Garrod 1981; Schank and Abelson 1977; Schank 1984), but CG is nonetheless a valid concept within the analysis of communication because there is more to CG than memory alone.

**Conclusion**

In this essay I have sought to establish the means by which S identifies the supposed common ground with H. H also makes assumptions about the CG with S based on H’s assessment of U in the context of utterance and of S as a person. S needs to be satisfied that H understands U well enough for S’s communicative purpose to, in S’s judgment, succeed. S must aim to be capable of presenting different material to different audiences according to the task to which U is put in such a way as to hold audience interest. The initial assumption is that, normally, common ground is quite readily identified by S and recognized by H. When it is not, H typically requests clarification (where circumstances allow). S and H may come to feel they are speaking at cross-purposes and consequently seek to re-assess the common ground. At worst S fails to communicate the intended message and, because of a degree of incomprehension, H may be bored or feel insulted by S’s use of language in U.

The notion of common ground necessitates a community, K, that observes social norms such as that S and H are mutually aware that, normally, their interlocutor is an intelligent and aware being. In other words each interlocutor believes of him/herself and fellow interlocutors that they are intelligent and aware beings and believes of fellow interlocutors that they too believe themselves and fellow interlocutors (including him/herself) to be intelligent and aware beings. There is a concomitant assumption of communicative competence: the knowledge and application of how and when to use utterances appropriately that combines with grammatical knowledge (of semantics, syntax, morphology, phonology) in the production of utterances in order to create a coherent text comprehensible to its intended audience. Normal use of language goes unremarked, but abnormal use may indicate a person living with autism, schizophrenia, or the like. Age, social status, educational level, and cultural background, etc. of both self and other will affect the assessment of an interlocutor’s use of language and probable range of comprehension. When a member of community K applies knowledge of a set of facts F in order to interpret P, a state of affairs or something said, s/he can presume that others in K will also be able to apply knowledge of F in order to interpret P. The existence of F, P, and the application of knowledge of F to interpreting P is CG for members of the community K. Once attended to, P is added to F, incrementing the common ground.
Common ground is dynamic. In conversation it is constantly developing and as themes change so does CG. We see this everywhere. Reconsider part of (6), reproduced here as (14).

(14) ‘Well, you do get up,’ she said, wrinkling her nose at the faded red settee, the two odd semi-easy chairs, the net curtains that needed laundering and the boy’s size library table with the venerable magazines on it to give the place a professional touch. ‘I was beginning to think perhaps you worked in bed, like Marcel Proust.’

‘Who’s he?’ I put a cigarette in my mouth and stared at her. She looked a little pale and strained, but she looked like a girl who could function under a strain.

‘A French writer, a connoisseur in degenerates. You wouldn’t know him.’

‘Tut, tut,’ I said. ‘Come into my boudoir.’

She stood up and said ‘We didn’t get along very well yesterday. Perhaps I was rude.’

‘We were both rude,’ I said. I unlocked the communicating door and held it for her.

(\textit{The Big Sleep, Chandler 1939, Chapter 11})

The dingy office theme is developed for readers in the description of the outer-office furnishings. The jibe about Marlowe possibly working in bed like Marcel Proust is introduced as a tongue-in-cheek explanation for the detective’s late arrival. It founders because Marlowe does not know who Mrs Regan is referring to and CG is developed as she explains and he accepts the explanation. There is then a change of theme when Marlowe invites her into his inner-office and another when Mrs Regan introduces the conciliatory admission of having been rude on their previous encounter; this aspect of CG is politely acknowledged by Marlowe as he holds the door for her to enter the inner-office.

Because of the ubiquity of language interaction among human beings it is most probable that our cognitive and social behaviour in language exchange is largely automatic and rarely consciously and deliberately planned. S and H automatically assume that the optimal means for S to get a message across in U and, concomitantly, for H to understand U is for each interlocutor to put themself into the other’s shoes. Hence, even though it is necessarily the case that what S utters is based on S’s own knowledge and perspectives there is normally not effortful, cognitively costly process of accommodation to the knowledge and perspectives of the interlocutor.

I have described what common ground is by recourse to what others have said on the matter, by introspection, and by analytical explication of some longer instances of real language data, both written and spoken texts. I reviewed near synonyms of \textit{common ground} such as \textit{common knowledge, mutual knowledge*}, \textit{shared knowledge, assumed familiarity}, and \textit{presumed background information} – all of which are to some extent relevant to the defining of CG. I drew attention to the significant flaw carried over from Lewis’ definition of common knowledge and Schiffer’s definition
of mutual knowledge* into Stalnaker’s definition of common ground (Stalnaker 2002: 716, quoted earlier). The runaway recursion would necessitate infinite processing on the part of each of S and H. This flaw has been accepted and repeated by many since, ignoring Prince’s caveat to consider what ordinary, nonclairvoyant humans do when they interact verbally (Prince 1981: 232). Following on the excellent Clark and Marshall 1981, Clark 1996: 95 attempted to circumvent it (see (1) above) but his definition includes a clause that calls itself, thus creating an endless loop, which would also dictate infinite processing on the part of each of S and H. Some more realistic description was needed.

On the basis of analysing real language data, Lee 2001, adopting a proposal of Brown 1995, reduces the number of steps in the recursive process to three. Bach and Harnish 1979: 267ff had proposed a similar limitation on the basis of a proposal by Scheff 1967 to just three levels of agreement that are required to achieve consensus. The Bach and Harnish 1979: 269 proposal for mutual knowledge ceases at level (iii):

Members of group G believe
i. that \( p \),
ii. that the members of G believe that \( p \), and
iii. that the members of G believe that the members of G believe that \( p \).

They do not say why the sequence should not continue with *iv:

*iv. that the members of G believe that the members of G believe that the members of G believe that \( p \) … etc.

The explanation is that there is no reason to do so.

More directly relevant to the definition of CG is the proposal of Garfinkel 1964: 33 (which he attributes to Alfred Schutz, 1899–1959): “the person assumes, assumes the other person assumes as well, and assumes that as he assumes it of the other person the other person assumes it of him”. This is essentially similar to part of my definition of common ground in (2), viz.: (a) every member, or almost every member, of community K knows or believes some fact or set of facts \( F \); and (b) typically, a member is presumed to know or believe \( F \) by (almost) every other member of K; and (c) typically, a member of K knows that both (a) and (b) are true.

A limitation of the analysis of CG in Lee 2001 is that he does not fully explore the commonality of CG, but looks at it from the point of view of just one participant. In my analyses of CG in three texts, I rectified this by examining the presumed beliefs of each participant in the uttering of U by S and in the understanding of U by H. On each occasion the analysis was specific to the text at hand, but the general picture is that captured in (4) and (8), collated in (15).

(15) i. X saying \( \varphi \) to Y pragmatically entails that (a) X believes that \( \varphi \) and (b) Y has some reason to believe that X believes that \( \varphi \).
ii. If in saying $\phi$ to Y, X refers to $\alpha$, this act of referring to $\alpha$ pragmatically entails that (a) X believes Y can identify $\alpha$ (knows who or what $\alpha$ is) and (b) Y recognizes that X believes Y can identify $\alpha$. Typically, when Y cannot identify $\alpha$, Y asks X for further information.

iii. X asking Y $\phi$ pragmatically entails that (a) X believes Y may be able to do $\phi$ and expects Y to accede or refuse (b) Y recognizes that X believes Y may be able to do $\phi$ and Y needs to decide whether to accede or refuse.

It seems probable that other illocutionary types may give rise to additional patterns corresponding to the preconditions of those illocutions, but decision about that must be left for another day.

References


