

Grammar as a social illusion: An anti-ontology, or nontology, of grammar

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1. Introduction

What is grammar? This is a fundamental question scholars have long been asking throughout the history of the study of language. In the context of the modern theoretical linguistics such as Generative Grammar and Cognitive Linguistics, the question would probably be answered in the following way: it is a cognitive assembly which enables us to command a language, be it innate and domain-specific or learnable and domain-general.

This paper, however, provides a fundamentally different answer to the question: Grammar is only an illusion we socially create. We humans only *feel* that there is such a thing as grammar, but in fact it does not exist, or at least there is no need to assume it does. It is only a product of our collective behavior and our inference, which regulates our behavior and forms our intuition. The reason why we feel its existence may lie in the fact that we can communicate linguistically with each other: we tend to think that the linguistic communication is possible because we have a certain shared system which guarantees the success in communication. This is certainly a *bias*, which causes us to unconsciously make our interpretation and knowledge of language as much consistent with those we assume others have as possible. Put simply, all we need is to *believe* that we share something with others. The belief drives us to feel, think, and behave as if it were a truth. We call such a driving force a *norm*, a kind of social pressure.

Here the Social Grammar hypothesis is presented:

- (1) **Social Grammar hypothesis (SGH):** Grammar, or a system of a language seen in all the scales and aspects spanning phonology, morphology, syntax and even semantics, is only a by-product of our social behavior, as a population, and inference, as individuals.

The hypothesis would probably evoke a number of questions, including the one related to how, under the hypothesis, we can deal with the seemingly ubiquitous regularities observable in language, because those regularities can most straightforwardly be explained if we assume the existence of a global system that governs how language behaves, i.e., grammar.

To answer the anticipated question mentioned just above, it should be made clear that there are actually two different aspects of grammar when we talk about it. They are the *observed regularities* and *grammatical intuition*, roughly corresponding to *behavior* and *awareness/consciousness*, respectively. We need a different reasoning for each aspect to argue for its social nature, so the two are discussed one by one in the remainder of this paper.

2. Observed regularity

Under SGH, the observed regularity is reduced to the following two factors: Emergence and the systematicity bias. The former is about how the regularity, if any, comes to exist, and the latter relates to the reason why we linguists assume the regularity, even if there surely are irregular aspects, some of which could even be devastating for the regularity. As for the former, emergence, the argument here has much in common with that of the theory called *Emergent Grammar* by Paul Hopper (Hopper 1998), so in the followings his argument will be referred to (2.1) and compared to HCG (2.5).

In addition, there is another factor related to both of the two: the locality, or the *local systematicity*. From the assumption that grammar as a global system does not exist, it follows that the reality of language should be much more messy, or unsystematic, than linguists generally assume. All the regularities we can observe in language, therefore, could only be local and not applicable to the whole system. This is a natural corollary to the emergence view of grammar, and is actually discussed in the field of *discourse-functional linguistics* including Paul Hopper's theory of Emergent Grammar mentioned just above. A comparison will be made, therefore, between SGH and discourse-functional linguistics later in 2.5.

2.1 Emergence

As have been described in linguistics, it is true that we observe some regularities in language that can be represented as grammatical rules. This fact alone could seem enough for us to assume the existence of the rules. However, given that the regularities are only the results of description, we cannot conclude that they exist only because we can observe them. The observed regularity could actually be derived from some other factors than are directly related to the regularity as a result. Such a "side-effect" type phenomenon is frequently found in our daily activities, which is usually called an emergent phenomenon, or simply an *emergence*.

For example, it is well known that on the riverside along the Kamo River in Kyoto city, Kyoto, Japan, couples take seats at regular intervals (Fig. 1). From an observer's point of view, the scene of equally spaced couples would be seen as the result of, say, an "equal distant" rule, but this is not the case. The fact is that each couple has tried to keep the maximal distance to the adjacent ones, which causes each of the spaces between two adjacent couples to be divided in half, repeatedly, resulting in the observed finely divided riverside space with equally distanced couples. The participants' intention to do something, in this case trying to sit most distantly to others, causes another unintended result, the equally distanced allocation, to emerge.

This is what Rudi Keller calls the *phenomenon of the third kind*, that is, "things which are the result of human actions but not the goal of their intentions" (Keller 1994:55). He argues that, under the famous "invisible hand" theory, language is one example of this type of phenomenon, along with inflation and traffic jam. According to his arguments, simply put, the observed regularities in language could only be epiphenomenal, side effects of language users' selection of linguistic items that results from trying to obey some other rules than what are usually de-



Fig. 1. Couples taking seats at regular intervals on the Kamo River

(“Riverside uniformity” by Chris Gladis, <https://www.flickr.com/photos/mshades/223555886/>)

scribed as grammatical ones. The same kind of idea is provided by other scholars and among them Paul Hopper’s Emergent Grammar would share the most with the view presented in this paper. He even states that grammar is “the name for certain categories of observed repetitions in discourse” (Hopper 1998:144).

If this is true, at the cost of systematicity, we can gain an advantage in treating the irregularity and formulaicity of language, which are in most cases wrinkles for describing and explaining grammatical phenomena. There are almost always irregularities, or exceptions to some regularities, in grammar. For example, in present-day English most verbs have a regular inflection pattern with the suffix *-ed* to form the preterit and the past participle, but even this highly regular rule suffers from exceptions. As is well known, verbs with a quite high frequency tend to inflect irregularly, as represented by the most idiosyncratic *be* verb declension. This means that in not so rare cases English speakers need to choose irregular past or past participle forms when they use verbs. In other words, their intended and perhaps conscious behaviors of using linguistic items are not in many cases rule-governed, at least in terms of verbal morphology.

2.2 English verb inflection system

Speaking of the verb inflection, it should be pointed out that there seems to be a bias behind the conception of it as systematic. It is true that a vast majority of English verbs have the regular inflection paradigm, but that does not guarantee that the inflection pattern in general is regular and systematic. As, among others, Bybee (1995) clearly reveals, both the regularity and the irregularity of inflection can largely be attributed to frequency-based factors: the regularity emerges when the type frequency of some pattern such as the past tense formation of verbs is high enough, and the irregularity is made possible when the irregularly behaving items have enough token frequencies.

Despite the frequency-governed nature, we tend to focus on the regular and systematic aspect, leaving the surely existing irregularities aside. This may be due to what can be called a *systematicity bias*, which makes us assume that the default state of language is systematic. Perhaps because of the bias, we are inclined to ignore, or at least downplay, irregular aspects of linguistic phenomena. As for the above mentioned verb inflection in present day English, we may probably use a specific form of a verb in a probabilistic fashion based on the frequency of the verb usage (therefore a few verbs such as *learn* and *thrive* are sometimes inflected regularly but at other times irregularly). In other words, our choice of a verb form may not be rule-governed, but statistics-governed, or governed by a more general rule, “to use the most probable one.”

2.3 Grammatical constructions

The same could hold true for syntactic phenomena such as grammatical constructions. English has a construction called the ditransitive construction, as exemplified in (2). Although many verbs can participate in the construction, there certainly is a somewhat strong restriction on usable verbs. A number of scholars have grappled with the construction including Gropen et al. (1989) and Newman (1996), and among them Goldberg (1995), for example, argues that the construction itself has a meaning and a verb can be used in the construction when its meaning matches that of the construction. If this is true, the construction can be accounted for by semantic terms and hence be described as a regular phenomenon.

- (2) a. She gave me a hint.
b. They asked her a question.

This is, however, hardly the case. In Pinker (1989:112-113), it is argued that a group of verbs called “manner-of-speaking” verbs such as *shout* and *whisper* cannot be used ditransitively. Goldberg (1995) applies her semantics-based theory to the fact, but as Coleman (2011) reveals, at least in the days of early modern English the verb *whisper* could participate in the construction, without any fundamental semantic change of the verb and the construction. It is of course possible to assume that only the constraints on the construction could change over time, but that way of argument is quite liable to fall into an ad-hoc one.

In addition, as Goldberg (1995) admits, there is another case where a historical accident brings irregularity to the construction. Some verbs experienced so radical semantic change that they became semantically incompatible with the ditransitive construction, but, strangely enough, they can still be used in the construction. The verbs are *envy* and *forgive*, although it is also reported that people of younger generation do not necessarily accept the ditransitive usage of them (Goldberg 1995:131-132).

- (3) a. He forgave her her sins.
b. He envied the prince his fortune. (Goldberg 1995:132)

These facts strongly suggest that what in linguistics is assumed to be general and systematic like the ditransitive construction could actually be less so. This would become much more

probable when we think about some other constructions such as the resultative construction (4). The construction has also been analyzed by a number of linguists, but, as Boas (2003) persuasively argues, the construction may only be a cluster of idiomatic phrases, or, as he puts it, “constructional idioms” (Boas 2003). Goldberg and Jackendoff (2004) almost agree with him and present a view of the construction as a “family of constructions,” given its large variability of meaning and syntactic constraints seen within the subgroups of the construction.

- (4) a. That drove me crazy.
 b. He broke the vase into pieces.

The fact that even with such irregular and idiosyncratic behaviors of those constructions, they are usually treated as regular and systematic is highly likely to be due to the systematicity bias. Grammatical constructions themselves are, after all, theoretical constructs which are quite possibly postulated with the purpose of maximizing the systematicity of description of a language. In other words, if syntactic aspects of a language can be described with a reasonably limited set of grammatical constructions, that would be great in terms of descriptive systematicity. This will work well if the language to be described is actually systematic, but, as discussed above, this would not probably be the case. Language could be best described in a bottom-up, as opposed to a top-down, fashion, given the locality or irregularity of it. In fact, for example, Goldberg (1995:133-136) herself presents a *usage-based* account for exceptions of the ditransitive construction discussed above, and the morphological arguments by Bybee (1995) also presented above are fundamentally usage-based. The usage-based view is a representative model of a bottom-up, empiricist theory of language under the framework of Cognitive Linguistics.

2.4 How social the emergent phenomena are

So far it has been argued that the seemingly systematic and regular phenomena that are usually analyzed in terms of grammatical rules could actually be not so and instead be reduced to only locally systematic sets of emergent regularities that are biased to be globally systematic. The argument needs a lot more validation, but if true at all, still a question may remain: *How social* are the emergent phenomena?

The answer to the question lies in the fact that any of emergent properties cannot come into existence unless they are shared across the population. This is a fundamental mechanism of how language changes in the course of history. What Keller (1994) calls a phenomenon of the third kind mentioned above is about the connection between a behavior of an individual and a pattern of a population. Based on the conception of language, emergent regularities could be resulted from individual behaviors but not reduced to them. One individual may have intentionally used a then innovated *-ed* form of a certain verb, but that alone cannot develop into an innovative pattern of verbal inflection. For a new pattern, or a new convention, to emerge, it needs to be spread, shared and entrenched in a speech community. In this sense the emergent phenomena can be said to be social.

The problem of this individual-population connection is also argued by Enfield (2014), who

called it a “micro/macro issue.” He models the process of language change as a “chain of iterated practice” swinging between the private and the public (Enfield 2014:23). The knowledge of an individual speaker of a language, which is private, comes from actual usage of a full range of linguistic expressions produced by others, which are public, and then, based on his/her private knowledge, the individual also produces some expressions which may probably in turn function as a part of the source for constructing other individuals’ knowledge.

For this iterated process to happen, there need to be an exchange of linguistic expressions in the course of communication of any kind. In fact, Hopper (1998) puts focus on daily conversational data as a place where emergent patterns are born. However, given its temporality, conversation in itself cannot be seen to function as a locus for emergence. In regard to this point, Hopper (1998:147) remarks that “emergent regularities are *aggregation*” (emphasis in original), but he does not specify how the aggregation occurs. Conversation as a locus of interpersonal exchanges can actually be what connects micros and macros, or the private and the public, but the important point here is how it aggregates into a large-scale, social level phenomenon. Enfield (2014) presents a number of filtering factors, or biases, working on each step of moving either from the private to the public or from the public to private, as well as on the social networks through which a given linguistic innovation spreads (e.g., Milroy 1980).

2.5 Comparison with discourse-functional linguistics

As represented by Hopper’s Emergent Grammar, arguments by the field of *discourse-functional linguistics*, DFL for short, have much in common with those under SGH. DFL in general assumes that grammatical properties are derived from discourse functions played in the course of communication. For example, Thompson (2002) argues that, based on daily conversational data, the English complement construction with an object finite complement (5) is primarily used to express epistemics, evidential, or evaluative meanings and therefore the complement would not actually be an object and an subordinate clause in its true sense . Hopper (2001) takes up the English pseudocleft construction (6) and concludes that the construction is used for getting listener’s attention, taking the speaker’s stance, or saving time for the speaker to think what to say.

- (5) a. I thought she might pull it out of the garbage.
 b. I don’t know if they did.
 c. I don’t give a shit what she thinks. (Thompson 2002:126-127)

- (6) a. What you need most is a good rest.
 b. What he’s done is (to) spoil the whole thing. (Hopper 2001:110)

Their arguments are mainly based on the biased distribution of frequency found in the examples of target constructions in conversational data. They reveal that, contrary to the prevailing views on the constructions that assume the systematic, logical, and/or compositional nature of them, in spoken discourse we almost only use highly limited range of them, resulting in some

prototypical usages with fairly high frequency and others with relatively low frequency. As for the object complements, they are quite often used with the first-person singular subject *I* (Thompson 2002:139). One of the consequences of these arguments is that grammatical constructions, or grammatical phenomena in general, could not be uniform and systematic. In this respect discussions in DFL look quite similar with those provided under SGH.

However, although assumptions in DFL and SGH actually have much in common, there is a stark difference between them. In DFL, as presented above, they usually present linguistic *facts* about a certain grammatical construction or the like, found mainly in spoken data, and, based on the facts, claim that the true nature of grammar could not be as previously thought in the tradition of theoretical linguistics. In contrast, SGH provides new *perspectives* of some linguistic facts, not the facts themselves, to present a new model of grammar. In other words, the theory under SGH takes a largely *logical* approach, as opposed to an *empirical* one, even if it takes empirical data into consideration to the maximum extent possible.

The important point here is that fact-based arguments may sometimes lead to a futile discussion in terms of its interpretation. In fact, arguments by Thompson (2002) are strongly rejected by Newmeyer (2010) as an account for the characteristics of the English object complements. He remarks that even if the spoken data shows a highly inclined distribution of functions or meanings of the construction, it does not mean that the prevailing account for it, which assumes that the object complement is a kind of grammatical object and therefore a subordinate clause, is wrong. On the contrary, he argues that the complement can actually be regarded as grammatical object and hence subordinate. This dispute could be labeled as an *interpretation dispute*, to which we can hardly provide any clear-cut answer.

Other less distinctive but worth-mentioning differences include the focus on social aspects of language as discussed above. DFL is also aware of social matters, but its focus would probably be on the *interpersonal* scale, not on the speech community scale. To borrow Enfield's terminology, DFL's primary concern may lie in the phenomena happening in the *enchronic* frame, which deals with things unfolding in social-interactive time scale, while SGH pays much more attention to things happening in the *diachronic* frame than DFL.

Another difference between DFL and the theory under SGH is a concern about *grammatical intuition*, which is the subject discussed in the next section. It seems that in DFL grammatical intuition is not taken seriously, but rather dealt with what should be rejected if possible. Hopper (2001:149), for example, points out the fact that "speakers' intuitions about sentences deprived of a context are uncertain." In contrast, SGH gives it serious consideration and tries to provide a model of grammar maximally compatible with intuition data. Now let us move onto the problem of grammatical intuition.

3. Intuition

Since what is called the Chomsky's revolution, native speaker's intuition has been one of the most popular means to investigate grammatical properties of language, at least in the area of theoretical linguistics. However, it is also true that intuition has always been subject to severe

criticism because of its unstability and unreliability. It is often pointed out that it always involves variability among and even within individuals. What is worse, it could easily be affected by observer bias and hence the judgment by a layperson and that by a language expert, or a linguist, may be systematically different (Dabrowska 2006).

However, even if grammatical intuition is not so reliable as a tool of investigation, it should be given some consideration as long as it shows a certain trend and is not completely random. We can, and perhaps should, ask where the intuition comes from.

There actually are studies about the source of grammatical intuition, many of which put focus on factors related to frequency. It should be pointed out, however, that the prevailing frequency-based arguments can provide explanations to the grammaticality judgment of a certain expression only if its actual usage and the intuition of it are compatible with each other. For a number of expressions we can find gaps between the two aspects, usage and intuition, or awareness.

In this section, first, the prevailing arguments on grammaticality judgment based on frequency-related factors and their problem are presented, then, as the alternative to the frequency-based arguments, the SGH's view on grammaticality judgment is provided, and some related topics such as our biases are discussed.

3.1 Frequency and entrenchment

Grammaticality and acceptability judgments are often attributed to frequency factors. One of the most famous arguments on this topic is about the concept of *entrenchment* (e.g., Braine and Brooks 1995; Brooks and Tomasello 1999; Theakston 2004), which shows that children's early overgeneralization of grammatical argument structure (e.g., the intransitive verb *giggle* is used transitively like in *Don't giggle me*) occurs more easily with less frequent verbs than with frequent ones, and that children and adults are more likely to judge as grammatical the sentences whose argument structure does not match the verb used in them when the verb's frequency is low. The entrenchment-based arguments, therefore, suggest that an expression could be judged as ungrammatical when it contains a mismatch between two or more well-entrenched grammatical elements such as a verb (e.g., *giggle*) and a construction (e.g., the simple transitive construction).

It seems that, however, frequency cannot account for all the aspects of grammaticality judgment. There are cases where an actually attested expression is strangely judged as ungrammatical. In other words, there are expressions whose actual usage and awareness are not compatible with each other. For example, in the spoken realm we can find sentences as shown in (7), which are labeled as the "double-*is*" construction, but they are usually judged as ungrammatical when asked (e.g., Taylor 2012:12).

- (7) a. The funny thing is is that they didn't say anything about it.
 b. The problem is is that she already paid for it.
 c. The issue is is that there is no budget anywhere for it. (Taylor 2012:10)

They are not products of mere processing errors, because they are used consistently among

people, which suggests that there are some rules and specific functions in the construction that cannot be attained by any other construction such as that with a single copula. Brenier and Michaelis (2005) proposes that the construction is used because *is* in such a sentence with a single copula as *The problem is he has to leave* should have a double function, that is, the syntactic head of the VP and the focus marker. The status of syntactic head requires the whole VP headed by the copula (e.g., *is he has to leave*) to be pronounced in a single intonation unit, but the latter focus-related function facilitates to produce a break before presenting a focused element, that is, the complement (e.g., *he has to leave*), resulting in the duplicated copulas as a final resort to solve the syntax-prosody mismatch.

How, then, can the entrenchment-based arguments account for the grammaticality judgment of the "double-*is*" construction? The construction is used somewhat frequently and hence can be considered to be entrenched, and there are no mismatched elements within the construction in terms of entrenchment. It may be argued that the construction with a single copula as exemplified in such a sentence as *The problem is he has to leave* can be more entrenched than that with double copula, and therefore the single copula variant could mismatch with the extra copula in the double copula sentences. This may sound plausible, but here a question would arise: if so, why, in the first place, can we use the "double-*is*" construction? Put differently, does entrenchment only affect the grammaticality judgment on expressions and not actual usage of them? This is quite unlikely, given that the concept of entrenchment is used to explain the matters on children's overgeneralization, which is clearly a part of actual usage. It is, therefore, safe to say that entrenchment-based arguments cannot directly explain any mismatch of the usage and awareness of a certain expression.

3.2 Consciousness and social inference

The important thing here is the distinction between our *conscious* and *unconscious* behaviors. When we use language, we are usually not so conscious about our own linguistic behavior, at least in the spoken context, as shown in the conservativeness and formulaicity of language use (e.g., Pawley and Syder 1983; Wray 2002). In contrast, when we think about language, we should be highly conscious about it, which may lead to a strange conclusion incompatible with our unconscious behavior. This would parallel the situations in which, once we think about how to do things we routinely and hence unconsciously do such as walking down the stair or riding a bicycle, we suddenly become at a loss how to do. This may be the key to solve the usage-awareness mismatch problem.

The next step is to give some answer to the following question: What are we conscious of when we are thinking about language? What is brought about by our conscious thought about language? This question would be crucial because, if the target of our conscious thought is something random, we cannot provide any solution to the problem about where our intuitions come from. SGH assumes that the reality of the conscious thought is what can be called a *social inference*, by which we imagine how the others use and think about language. Given that language makes sense only if it is shared across community, we are never allowed to use

language as we like. We should always adapt ourselves to others, which is a fundamental mechanism of *conformity* (Keller 1994), forcing us to say things as much alike as others do. This process functions as a natural regulator to constraint the degree of creativity of our language use. Excessively creative use of language may probably lead to a deviation, which should be a vital risk for us as social creatures.

The problem here is that we never know exactly what expressions are possible and therefore we can only infer the boundary condition deciding what is possible. From this fact it follows that our judgment on the possibility of some expression may easily differ from person to person, or from situation to situation, because of its indeterminacy. This is the reason SGH assumes why grammaticality judgment can sometimes be divergent. At the same time, in many cases where grammaticality judgment converges our social inferences should also be convergent under SGH, and this can largely be explained based on the following two factors: *frequency* and *blocking*. As for the former, expressions almost everyone accepts as grammatical are considered to be highly frequent and hence entrenched, or at least have some highly entrenched part, the other parts being not incompatible with it, which is practically the same argument as the entrenchment-based one introduced above, but is crucially different from it in the following point: SGH assumes frequency as the source for our social inference. High frequency does not only mean the possibility of strengthening our memory, or *cognitive* entrenchment, but also functions as an evidence for *social utility*: the more frequent a certain expression is used, the surer we could become that the expression is socially accepted and hence we can safely use it. In this sense high frequency can also be seen as the cause of *social entrenchment*.

The latter, blocking, is what is often discussed in the field of morphology in explaining the lack of expected derivative forms. For example, while we call a person who walks a *walker*, we do not call a person who lives a *liver* using an *-er* noun derived from the verb *live*, which is attributed to the existence of the word *liver* as a name for an internal organ that could block the derivation of adding *-er* to the verb *live*. For the expressions we usually reject as ungrammatical, SGH assumes that the blocking plays a role. In most cases we can infer what the speaker/writer wants to say by saying/writing an expression even if the expression might not be grammatical, and we can, therefore, construct an alternative expression which is thought to be usually used to express the same meaning. If we hear someone say “The problem is is that he has to leave,” for example, we can easily understand what the speaker intends to say by the sentence and may possibly think that to convey the same meaning, we usually say “The problem is that he has to leave” or “What the problem is is that he has to leave,” resulting in rejecting the sentence.

How can we get to a socially plausible form of expression to convey a certain meaning, in order to single out one among competing expressions such as a “double-*is*” sentence and a single variant? SGH assumes that we could use different types of resources to infer a socially appropriate form suitable for a target meaning. One of them is what can be called the *logicality*: If one of the two competing expressions cannot be regarded as logical, the expression would likely to be rejected as ungrammatical. For example, there is a controversial phrase in English, mainly

in the American dialect, which is sometimes claimed to be illogical and hence not grammatical. The phrase is *could care less*, used synonymously to its negative form, *couldn't care less*. The reason why some reject it would probably lie in the fact that the two competing forms, the positive and the negative, coexist as synonyms. Why, then, is the positive form not preferred to the negative one? Here the logicity matters. We can find a post in the website called *English Language & Usage* in which a user poses a question asking whether the phrase *could care less* is correct or not, and the user presents her own idea that it is not correct because the competing negative version, *couldn't care less*, “seems a lot more logical.”¹⁾ Without thinking about its appropriateness, we unconsciously and quite frequently use such seemingly illogical expressions, but once we pay attention to its appropriateness or grammaticality, they could suddenly start to seem strange. The strangeness may change into the reason for rejection of it if there is any alternative way to express practically the same meaning.

Another type of resource is the usage in *written language*. We tend to regard a written form as more appropriate than a spoken form if there is any discrepancy between the two. We can call it the *written language bias*, which will be discussed in detail below.

3.3 The written language bias

Consciousness is not only the matter of grammatical intuition, but also of some types of our daily linguistic activity. The most typical of them is *writing*. Written language is often claimed to be a locus where prescriptive grammar, if any, resides, in the sense that it largely is a product of our conscious process of constructing and then, in some cases, revising an expression, and the appropriate way of writing is usually taught in school (Cf. Ong 1982). Consequently, usage in written language would likely to be a resource for grammaticality judgment. For example, Port (2010) explicitly argues about the effect of literacy training on our *phonological* intuition, which provides us with a feeling that the sound of a word is composed of a sequence of letter-like elements, which are commonly called *phonemes*. Evidence strongly suggests, as Port (2010) remarks, that phonemes would not be psychologically real, and our phonological intuition would probably come from the knowledge about spelling we have obtained through literacy training.

The same thing could hold true for grammatical aspects. As for the problem of *could care less* discussed above, we can find a gap between frequency distributions in written and spoken realms of American English. Data shows that in American English, the phrase *could care less* is used more frequently than the negative version in spoken language, whereas the opposite tendency is found in written language (see Table 1). This discrepancy suggests that those who reject *could care less* may refer to the written convention, in which the negative form is still dominant in terms of frequency. In contrast, people using and therefore accepting the positive version do so maybe because of its relatively high frequency: they simply prefer the expression that they hear more often.

¹⁾ <http://english.stackexchange.com/questions/706/which-is-correct-could-care-less-or-couldnt-care-less>

Table. 1. *Couldn't* vs. *Could care less* in Corpus of Contemporary American English (COCA: Davies 008)

	Written	Spoken	Total
<i>couldn't care less</i>	301	45	346
<i>could care less</i>	168	71	239

The bias in favor of written language is also found in the "double-*is*" construction. The construction is considered to be used basically in the spoken realm, and in fact, typical examples of the construction are found exclusively in the spoken data of a corpus of American English (COCA: Davies 008).²⁾

4. Conclusion

This paper presents a hypothesis about the exact nature of human language grammar named *Social Grammar Hypothesis* (SGH), which proposes that grammar should be seen as a social illusion, in the sense that the observed regularities may only be the socially-navigated aggregation of our unintended behaviors, and that the our grammatical intuition could be the result of our social inference under the pressure of conformity.

Under SGH, therefore, two different aspects and processes are presupposed for what we call grammar, and, thanks to the duality, SGH can actually account for the discrepancy between observed patterns, or usage, and our intuition of a certain expression such as a sentence exemplifying the "double-*is*" construction. However, SGH could take a further step here to assume an underlying principle behind the two. As a concluding discussion, that possibility is explored in the following.

As discussed in 2.1, observed regularities found in language as emergent phenomena are considered to be largely governed by frequency, which means that frequent items tend to be selectively reproduced. This tendency can be reinterpreted as a background mechanism of our conservativeness in using language. Then, if conservativeness matters at all, we can find a common point between the factors producing emergent regularities and our grammatical intuition, because the latter is also considered to be related to our conservative mind, as argued in 3.2. It is, however, not enough for us to assume conservativeness as a driving force for shaping grammar, because a question still remains: What makes us so conservative?

To this question, SGH answers that it would be because we would like to *minimize risks* as social creatures. Conservative usage is likely to maximize the success rate in communication and minimize the possibility of being regarded as an outsider, which could be in some cases fatal. Conservative thought could be resulted from our *fear* that a language we use might be transformed into something so anew that we would no longer fully use and understand it. In other words, we may be always afraid of being left behind the change in our language and

²⁾ Brenier and Michaelis (2005:48) provides the list of NPs typically appearing at the subject position of the construction: *the thing, the problem, the question, and the point*. Then either of the phrase followed by two consecutive *is*'s is searched on COCA and 102 examples are found exclusively in spoken data, with only two instances that do not exemplify the construction.

hence be thinking that we should put a brake, if possible, on the change, resulting in largely conservative grammaticality judgments.

Here it should be pointed out that conservativeness is not the sole tendency found in our grammatical intuition. Language indeed has a certain degree of creativity and we actually have due tolerance for the creativity. Then how can we balance the tolerance with risk minimization? The answer may lie in regularity, or *transparency*, of grammar. Regularity provides us with a high *predictability* of form-meaning correspondence, which strongly guarantees the intelligibility of any linguistic expression. In other words, regular grammar minimize the risk of our own language going far away from us because we could in principle understand the meaning of any novel expression based on the predictability provided by the regular grammar. In this sense, logicity discussed above related to the problem of *could care less* could function in the same way as regularity: logically compositional expression is likely to tell us the exact meaning of it based on its parts even if it is novel as a whole. Therefore, risk minimization could be a basic principle covering every aspect of human language grammar.

Incidentally, there is an argument that grammar becomes more regular if the chance of talking to strangers increases Wray and Grace (2007), which can be connected to the above discussion. We have less commonality with strangers than friends and acquaintances, and hence it is quite natural for us to use much fewer formulaic expressions when talking to strangers, because such expressions are likely to require a lot of background knowledge shared by the speaker and the hearer. As a corollary to this we would use less formulaic but still as much intelligible expressions as possible, resulting in a highly regular and transparent patterns. Regular grammar could, therefore, be seen as another consequence of risk minimization.

As a final remark, it is pointed out that there are a number of tasks to be done to validate SGH. Among them, one of the most urgent tasks is to find evidence of biased social inference, which forms the very basis of the hypothesis. In this respect, arguments on cognitive biases in the field of *behavioral economics* (e.g., Ariely 2010) would be suggestive. Behavioral economics argues about our economic behavior based on the assumption of *bounded rationality*, as opposed to *perfect* or *global* rationality. Put simply, we as players of economic activities are much less rational than previously thought in the field of economics and generally believed, and, instead, our behaviors are largely governed by a number of cognitive biases. The point here is that, as the title of Ariely's book 2010, *Predictably irrational*, suggests, we do not behave randomly because we are irrational, but our behaviors show predictable patterns, which can be attributed to the biases we have.

Clearly, rationality can be linked to the regularity of language, because, if we are rational enough, it would be natural for us to make our own language fully regular. In this sense, the irregularity of language could partly be attributed to our bounded rationality. Our lazy and highly conservative mind may prevent us from becoming completely rational and having a bird's-eye view of our own language. It is reported that there is even a case where some regularity of a language is *lost* in the course of vertical transmission. That is the the story about the nativiza-

tion of Esperanto, an artificial language created by a Polish linguist L. L. Zamenhof, which was designed as a “perfectly regular” language. Its perfect regularity was, however, reported to disappear in the course of *nativization* of the language by the generations of the children born in the Esperantist families (Bergen 2002). Many pieces of regularities were not succeeded and reproduced by the next generation of native Esperanto speakers, but most of them can be attributed to the influence of the transfer from each or both of their parents’ native languages. There is, however, at least one trait that cannot be regarded as a result of native language transfer: the lost of the accusative case maker *-n* (Bergen 2002:584-588). What is the most interesting here is that many of the still persisting uses of the accusative case marker are found in fixed expressions such as greetings (e.g., *saluton* “hello”: Bergen 2002:586). Regularity can be superseded by the needs of practice. even if the input language shows the full regularity, we are “capable of failing to see” it (Wray and Grace 2007:567).

Now it may be the time for us to shift from the rationality-based theory of language to the irrationality-based, or bounded-rationality-based, theory. That would be a radical change that needs drastic modifications of the basic assumptions underlying our theory. The hypothesis presented in this paper, SGH, proposes a possible remedy for the radical shift. Therefore, in conclusion, although there still remain a lot to be done, SGH is probably on the right track toward the construction, or the reconstruction, of an innovative theory of grammar.

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