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Emma Reidy   March 10, 2017

An Investigation of the Linguistic Properties of Emoji

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Abstract

An Investigation of the Linguistic Properties of Emoji
By Emma Reidy

Since their rise to popularity over the last couple of years, there have been many claims that emoji are beginning to constitute their own language (Emogi 2016). This study aims to see whether this is the case, or whether they are simply pictorial representations of English, or another previously established language. At a time when emoji are incredibly popular, being used by 92% of the online population according to one study, this is highly culturally relevant (Emogi 2016).

Since emoji are a new cultural phenomenon, there has been minimal research previously conducted about them. Almost all of the existing research has focused on which populations most frequently use emoji, direct translation of emoji, or the importance of emoji in market research, all of which seem to take for granted the fact that emoji are a language or ignore the issue altogether (Emogi 2016). It is, in fact, the very lack of research into the linguistic properties of emoji that makes this study so necessary.

The study, conducted at Emory University, uses a two-part survey to determine the emoji usage habits of undergraduate students, both on the individual and sentence levels. The surveys analyze single emoji as well as emoji phrases found on the internet and present them for translation, both from emoji to English and vice versa. Analysis will look at the consistency of usage across users and also within the use of individuals. Word ordering and sentence organization are also analyzed. The ideas that consensus and grammar/meaning rules are central to language are used as key concepts in this study.

Though the research of emoji may seem lighthearted, the implications of establishing a language based entirely on images are enormous. In a world where global travel and intercultural communication are commonplace, creating a form of communication that can cross previously established linguistic borders is nothing to scoff at. This experiment hopes to be one of many into this exciting new field.

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Plates, Tables, and Figures

Introduction & Literature Review

Within the last ten years, with the rise of handheld individual technology, a new form of communication has appeared: emoji. From t-shirts to pillows to inflatable pool rafts, these yellow circles with faces have taken on a life of their own. But what exactly are emoji, and what purpose do they serve? From the Japanese words "e-" meaning "picture" and "-moji" meaning "letter" or "character," an emoji is "a small digital image or icon used to express an idea, emotion, etc. in electronic communication" (Google 2016). Originally used to refer to any smiley face in technological media, common and widely accepted use has narrowed since Apple created an icon keyboard, called the emoji keyboard, consisting of the characters which are now the primary referent for the word "emoji."

It is also important to note the difference between emoji and "emoticons," the broader umbrella term that is now used to refer to any face typed in technological forms such as ":-)" or "¯_(ツ)_/¯." Emoticons will not be the focus of this paper.

It is all well and good that emoji are a new way that people are communicating with their friends through technology, but why and how are they linguistically relevant? Over the last year I have observed many claims and assumptions that emoji are their own language, a bold and (in

my experience) largely unsubstantiated assertion. Everything from informal sources like blogs to fully-fledged scientific reports are heralding "the rise of a new language," even calling it the "fastest growing language in history" (Emogi 2016, Instagram Engineering 2015). An emoji was even awarded the title of "Word of the Year" by LiveScience, indicating their rise in prominence and relevance. While it is true that the 2015 Emoji Report found that they are used by 92 percent of the online population studied and that they are being used to communicate across cultures through travel

and to address social justice and change issues, are they really becoming a language, or are they something else?

Other communication systems that are not language do exist, such as semiotic systems, or those based on signs. Semiology, or the field "which studies the role of signs as a part of social life," does include language, but also includes many other categories of signs that are not subject to all of the same constraints as language (Saussure 1983: 15). A promising subcategory of semiotics that might be an appropriate categorization for emoji is the pictographic system, where pictures are used to directly communicate meaning without the requisite arbitrariness or grammar systems of languages. Should emoji not have all of the characteristics of a language, this is another strong possibility for what they may be.

I have no doubt about the importance and popularity of emoji- they are being used to communicate across linguistic barriers, in everything from travel flashcards to summaries of great works of literature (Emogi 2016). There have even been entire classic books translated into emoji in an attempt to help them reach audiences that might not otherwise have access to them,

such as *Moby Dick* (known this time around as *Emoji Dick*) (Benenson 2016). They are relevant and important- the question being raised here is simply whether or not they can be deemed a language, and whether it is an overestimation of their ability to use them in place of other established languages. This study investigates their complete independence from other linguistic systems.

In order to begin this investigation of the linguistic status of emoji, it is first important to define what we consider a language to be. There are many accepted definitions of what constitutes a language, so this is not as straightforward an action as it seems from the onset. Webster's Dictionary, a non-linguistic source, defines language as "the systems of words or signs that people use to express thoughts and feelings to each other" (Merriam-Webster). By this definition, emoji very well may be a language- while their categorization as a "system" could be debated, they are signs and they are certainly used to convey thoughts and feelings.

There are many definitions of languages that immediately conflict with the way emoji function. Susan Tamasi and Lamont Antieau's Language and Linguistic Diversity in the US refers to language as an "open, arbitrary, conventional system of sounds used for communication within a linguistic community" (Antieau &Tamasi: 3). The idea of arbitrariness is problematic for emoji from the onset because they do act as pictorial representations of their referents, and it is debatable whether or not they change because, while they may change in meaning, actual changes in the form of emoji are not at the discretion of the users. Also, the textbook entitled *Linguistics for students of Asian and African languages* defines language as "a system of communication based on words and the combination of words into sentences" (Eifring &Theil: 2). While defining language as a system of words and the requirement of sentences are problematic for emoji, the definition is also hinting at something like a syntax that allows for the

combination of words into a sentence. It still remains to be seen whether or not this type of rule system is in place for emoji.

Rather than be held to one definition, others prefer to describe the features that language is known to possess. A prime example of this is Hockett's paper on the thirteen design-features of language, for which "there is solid empirical justification for the belief that all languages of the world share every one of them" (1960: 6). While all thirteen are of vital importance, some important characteristics to emphasize are **total feedback**, or the ability to hear and know everything that one himself says; **arbitrariness**, or the fact that there is no intrinsic relation between a word and its referent; **discreteness**, or the ability of language to be broken down into smaller bits of meaning; **displacement**, or the ability to talk about things that are remote in both place and time; and **productivity**, or the ability to form unique and innovative phrases and still have them be understood. The special importance of these features is solidified by their subsequent appearance in George Yule's *The Study of Language*, a popular introductory linguistics textbook, as they are among the most commonly emphasized characteristics when describing language (2010: 31-34). While some of these, such as total feedback, are not problematic for emoji, there are others that merit discussion- emoji are not arbitrary, we do not know if they are discrete, we do not know how effectively they can express remote ideas, and it is unclear how productive they are. Many of these issues will be addressed, either directly or indirectly, in this investigation.

Chomsky defined language as "a set (finite or infinite) of sentences, each finite in length, and constructed out of a finite set of elements" (1957: 13). This definition raises no problems for emoji, as their finite set is not problematic in terms of Chomsky's definition, and they can indeed be used to make sentences that do not go on forever. In referring to a finite set of elements, he is

talking about a generative syntax and the idea that if language is present, so too must grammar be present. Again the theme of a rule system as a basic requirement of language is key.

Many philosophers also offer their view on the subject. Wittgenstein speaks widely about the process of understanding and meaning in a language, how the meaning of a word is "its use in the language;" not an abstract link, but how it is actually used (1953: 20). This idea of meaning as use in language is central to this entire investigation, and will be important to remember for the future. This investigation tests the meaning of emoji through their use in communication, and the presence (or absence) of community agreement will be central in whether or not they are considered a language

Searle asserts that "specific languages…consist of three components: a phonological component…., a syntactical component that determines the arrangement of words or morphemes in sentences, and a semantic component that assigns a meaning or interpretation to words and sentences" (2007:17). This definition will be important to this investigation, though without the phonological component since emoji are not spoken. This is still in accordance with Searle's definition, as he goes on to say that the phonological component is not as key as the other two, as languages have existed without a traditional phonological system as he defines it. My investigation will thus center on determining whether emoji have both a syntactical and a semantic component. This will shape not only the entire investigation but all of the results, as a different definition of language might lead to different, or even opposite, conclusions.

Given the diversity of language definitions, it is not surprising that some people think emoji are a language. However, I see language as defined in the following way:

- Based on Searle's fundamental definition, language is comprised of syntactical and semantic components

- Language must contain meaning that is agreed upon between and within users

- Language must possess a syntax that allows for original and productive word ordering

The second and third requirements branch from the overarching definition, presented first. For the remainder of this paper, this will be what is meant when "language" is used. The research questions for this investigation are based upon discerning the presence or absence of these components in emoji, and are listed below:

- Is there consensus between people about the meaning of emoji? (testing meaning)

- Did people use emoji the same way in both surveys? (testing meaning)

- Are people translating directly, or are they allowing for possibility of different word order? (testing syntax)

All analysis will be done with the goal of answering these three questions, and their answers will subsequently determine whether emoji are a language based on the previously established definition thereof.

A notable characteristic of emoji is that they, unlike most forms of communication, are not governed by their users- they are added and taken away with each update of the emoji keyboard, and if an emoji does not exist for a certain concept, one cannot simply "coin" or make one up unless they are a talented programmer. It is this lack of control of content that has led users to become creative with alternative meanings for emoji and to give strong feedback on what they would like to see introduced to the emoji keyboard in the future. This phenomenon can

be seen perfectly through the peach emoji- often called the "butt emoji," it is so often used for this meaning that it has become its primary meaning, and when the image was changed in the
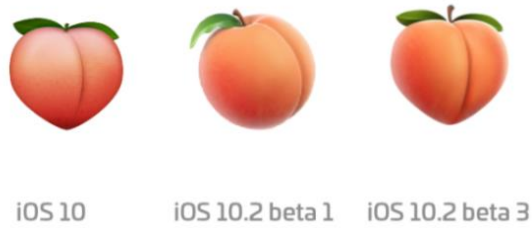
iOS 10.2 update to less resemble a butt, there was so much uproar that Apple changed it back (Gerstein 2016).

Another notable feature is that there is also no spoken component to emoji- it is not at all common or socially acceptable to say "upside-down smile emoji" or "umbrella emoji" in everyday speech, rendering emoji solely a written form of communication. Finally, a new phenomenon that only emerged during the writing of this paper is the auto-fill emoji option that accompanied Apple's iOS 10 update, wherein emoji come up as an automatic option to replace their referent words- examining to what extent these are direct meanings and to what extent these are based on connotation, as well as the popularity of this feature, is a promising direction for future studies.

It is also important to clarify the misconception of emoji as a writing system. Writing systems are generally defined as "recording a particular utterance or idea," a representation of language that goes "beyond the capability of spoken language" (Dawson & Phelan 2016: 597). It is highly possible to have communication systems that are not writing that are also visual and permanent, that still send messages. However, the difference of these systems is that they do not represent language and "language includes many things that cannot be represented by such pictures," along with a higher degree of specificity (Dawson & Phelan 2016: 597). Regardless of whether or not emoji are a language they are a visual communication system, but their status as a writing system is contingent upon their definition as a language.

With respect to the current study design, I intentionally created a study that looks for how individuals translate individual emoji, then how those same individuals interpret emoji when they are used in longer strings. I will be looking at both the consistency between the two tasks and individuals and whether there is any community agreement. I am also investigating if there is any evidence for an internal syntax of emoji that is different from English. It is important to note that there may be consensus in either grammar and syntax or consistency of mapping but not the other; flag symbols and train signals possess consistency but not grammar, indicating that it is possible to agree on semantics but not syntax and still communicate effectively. It could also be argued that the opposite is possible; Chomsky and others posit that it is possible to have a language that exists only in the mind of the individual, therefore demonstrating that even if there is not agreement between people in meaning it does not preclude the presence of syntactic rules (2016).

If participants agree on the meaning of emoji on both individual and phrasal levels, it strengthens the position of emoji as a potential language because there is evidence that they can be used to communicate effectively between users. If there is no such agreement, emoji fail to reach one of the criteria of language and cannot be categorized as such. If there is consistency in use within participants, this also strengthens the linguistic position and efficiency of emoji. If participants consistently use the exact same ordering in translations of both directions (English to emoji and vice versa), it could show that there is no difference in syntax or meaning between the two and that emoji are simply a pictorial representation of English or other languages. On the other hand, if the translations are not exactly the same, it may indicate that users equate words and emoji, but that there is not necessarily a one-to-one correspondence between the two, and that unique grammar is emerging for emoji and that they may be on the way to becoming a new

language. These results will not attempt to conclude definitively whether or not emoji are a language; the hope is simply to discover what this method says about the direction in which emoji are heading in terms of becoming their own communicative system.

Whether or not emoji are becoming their own language, this study does not mean to diminish the importance of emoji. Emoji are used for intercultural and domestic communication on a daily basis, not to mention that they are a fun and interesting way of conveying ideas. They are already being used by major brands such as McDonalds, IHOP, and Pepsi to appeal to younger generations, as well as across cultures (Emogi 2016). Ultimately, whether they are a language or not, Steven Pinker is correct in stating that "they are there to convey some communicative force that would not be obvious just from the arrangement of words on a page;" they already serve a purpose and have a unique function (Emogi 2016). Should they be an emerging language, this would simply add to their official recognition and prestige, but I have no doubt that they will continue to be used well into the future. This study simply aims to see whether they are technically a language based on an operative linguistic definition.

<center>Methods</center>

Participants were asked to complete two surveys, as well as a basic information sheet that included information such as age, primary language, and frequency of emoji use, factors that were later used to examine the data collected. All of the surveys were taken through GoogleForms, one of the only secure survey sites that allowed emoji as a response option. In order to control for variation within emoji design, which has previously been shown to impact interpretation of meaning significantly, all responses were recorded on Apple products using the standard iOS 10 emoji.

The first survey consisted of 40 questions, each consisting of a single emoji, and the participant was prompted to "translate the emoji into English," using a short phrase or individual word. The purpose of this part of the survey was to determine if there is consensus on the meaning of individual emoji.

Example of a question from the first part of the survey

2. How would you translate this emoji into English?😍

Short answer text

Upon completion of the first survey, the participant was given the second survey, which was based on the translation of emoji to English and vice versa. The second survey focused on complex messages, all consisting of more than one emoji. The second survey included four different categories of questions: translation from English to emoji and emoji to English, in both open-ended and multiple choice forms. Multiple choice questions were included to see if there

was any consensus among common forms as to which was the most correct, but open-answer questions were also present to ensure that any alternative forms would also be presented and to see what participants would do if given absolutely no prompts as to what the correct answer might be. Translation from English to emoji and vice versa were both included to see if there was consistency present when translating both directions, and to see if the same grammar rules were used in both languages or whether the rules of the original form were used and differed between the two processes.

Example of a multiple choice English-to-emoji question

17. Imagine if you were trying to send a text with the following meaning- how would you do so using only emoji? "Don't go to the city"

○ ❌🚶➡️🏙️

○ ❌🚗➡️🏙️

○ 🚗➡️🏙️❌

○ ❌➡️🏙️

Example of a multiple choice emoji-to-English question

7. Imagine that you receive the following text. What do you think the sender is saying? Translate to English as best you can 👦🏾👦🏼⚾➡️🏆💯🎉🍕

○ The boys with a baseball found a trophy and celebrated with pizza

○ The boys brought a baseball to see 100 trophies and then ate pizza

○ The boys played baseball and win the championship and celebrated with pizza

○ The boys who play baseball went to the hall of fame and then ate pizza

Example of an open-ended emoji-to-English question

4. Imagine that you receive the following text. What do you think the sender is saying? Translate to English as best you can 🎉🕺🎁🏡⁉️

Short answer text

Example of an open-ended English-to-Emoji question

11. Imagine if you were trying to send a text with the following meaning-how would you do so using only emoji? "I am going to Hawaii for vacation next week"

If you cannot answer the question, you may write "I cannot translate this sentence into emoji"

Short answer text

The sentences in the second part of the survey were chosen deliberately to test for specific phenomena. Many were found online in actual conversations, therefore representing emoji in use rather than simply one person (the author's) perceptions of emoji use and sentence formation. For the remaining questions that did not come from an online source, they were designed to test one of the research questions. Many of the multiple choice questions were designed to test ordering and syntactical rules, and therefore contained many of the same emoji simply ordered different ways in different answer choices. Those designed to test differences in meaning and usage used related emoji in similar contexts to see which would be selected by users. The second part of the survey also included some questions that were purposely designed to be more difficult: one of the translation questions included the phrase "I wish" to test whether recursiveness and abstract concepts/emotions could be represented, and the sentence "the boy and girl kissed" was included to test what would happen in a sentence where the object and subject were less straightforward and translation could not necessarily simply be done linearly.

We will see later whether the complexity of these structures made a difference in meaning and ordering.

The goal of the second survey was to see if there was any agreement of response in terms of grammar and syntax or meaning (two fundamental components of language) and if there was a change in meaning between individual emoji and their use in a phrase, as many of the emoji used in the first survey were used again in the second. The different formats of questions in the second survey also allowed for effective testing while taking into account individual testing format preferences, while also allowing for unlimited variation in the open-ended section and more controlled response in the multiple choice (which will result in more straightforward analysis). There was no time limit given for either section of the survey. It was decided for the multiple choice questions that only one option could be selected, in order to minimize confusion, keep the logistics of analysis more straightforward, and to ensure that participants did not simply select many options with no thought. It was also decided that participants would be given the option to say "I cannot translate this phrase" when translating phrases from English to emoji in order to ensure that they did not just enter random sequences so that they could move on to the next question.

All data was collected on the main (Atlanta) campus of Emory University in the public spaces of the campus's academic buildings, such as classrooms and conference rooms. The population studied consisted entirely of Emory undergraduate students between the ages of 18 and 22, and there was no limitation to participation based on any characteristic, including primary language, though that data was collected for later demographic analysis. By limiting the study to undergraduate students at one university, factors such as age were controlled for, though a wide variety in race, gender, socioeconomic background, and other factors remained.

Participants for the experiment were recruited through word of mouth and paper flyers placed in academic buildings around Emory University's campus. About forty students participated in this study. The author advertised the research project in her classes and extracurricular activities, and asked many of her friends to do the same. All participants willingly took the survey, and it was made clear from the beginning that there was to be no compensation for participation, and that risks involved were minimal. All information was anonymous and confidential, with no names or identifying information being collected and all results being stored on a secure server and only on the experimenter's personal laptop. All students were told the details of the survey process before beginning, and were made aware that they could stop at any time, though in their survey results would not be used in that instance.

Results: Analysis and Discussion

Analysis Procedure

After all of the data was collected and stored on the experimenter's computer, it was analyzed to discern potential patterns in meaning and grammar, and to analyze whether emoji were mainly used as a direct translation of already-established English rules. Analysis was done using Microsoft Excel. All of the results were synthesized from the Google Forms results page and entered into Excel sheets for easier viewing, and the relative frequency of each response in both the first and second surveys was recorded. Basic statistical methods such as frequency, mode, and measures of central tendency were used to determine general trends.

Analysis of the survey results was broken down into three questions, each of which represents a fundamental part of language as defined for this essay. Each question was analyzed independently based on the survey questions designed to demonstrate each phenomenon.

- Is there consensus between people about the meaning of emoji?

- Did people use emoji the same way in both surveys?

- Are people translating directly, or are they allowing for possibility of different word order?

It was not possible to compare the consistency of native English speakers and non-native speakers because only one non-native speaker presented viable data and therefore does not represent a valid sample of the population. It was also impossible to compare the results of frequent versus non-frequent emoji users because all of the participants identified as frequent users (and it therefore makes sense why they would want to participate in this study). It is worth

noting that all of the variety and the low levels of consistency found in this data were present

within the use of those who claim to use emoji most often. Finally, though there was a difference

in mean consistency between those who normally use over two emoji at a time (0.2738

consistency) and those who normally use two or less emoji at a time (0.24113 consistency), this

difference was not statistically significant.

Research Question 1: Is there consensus in the answers?

Before any analysis could be done, the data had to be taken from its original location in

the Google forms, where it was very difficult to visualize or interpret, and moved to an Excel

document on the experimenter's computer. Since Google Forms also did not recognize answers

as the same if there was any difference in capitalization or formatting, some regrouping of data

had to be done as well.

5. Imagine that you receive the following text. What do you think the sender is saying? Translate to English as best you can 💇🏽‍♀️💆🏽‍♀️😳😬
(38 responses)
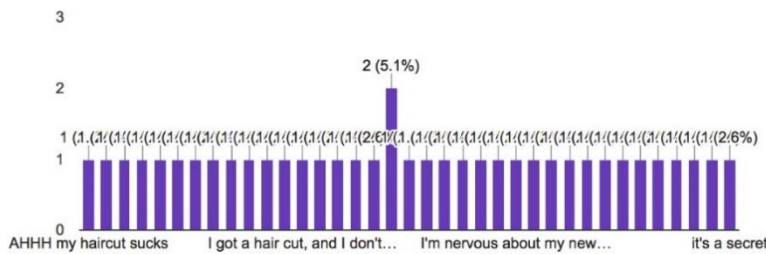
Reformatting of results in Microsoft Excel

	A	B	C	D	E	F	G	H	I	J	K	L
122												
123	Two girls			Haircut emoji			Lightbulb			Red heart		
124	best friends	4		Haircut	31		Idea	13		Love you	1	
125	Dance	1					Brilliant	1		Basic love	1	
126	Dancers	3		Cutting hair	2		I have an idea	4		Heart	9	
127	Dancing twins	2		Getting a haircut	2		Idea!	2		Heart/love	4	
128	Dancing with a best friend	1		Haircut/getting beautified	1		Idea/lightbulb	4		I love you	2	
129	Friends/Hanging out	1		I'm getting a haircut	1		Lightbulb	12		Love	14	
130	Friendship	1		Pampered	1		Light	1		Love (stronger than yellow heart)	1	
131	Fun	1		Styling	1		Light/idea	1		Love :)	1	
132	Girl Friends	1		Cut	2		New Idea	1		Red heart	2	
133	Twins	10		Cut my hair	1		Having an idea	1		Romantic Love	2	
134	Twinning	4					Lightbulb (metaphor for an idea)	1		Stronger love	1	
135	Twins, dancing girls	1					Someone was just struck with an idea	1		Best friends on snapchat for more than two weeks	1	
136	Ballerina	1								Romantic Heart	1	
137	Best friends/cute dancing twins/close girl friendship	1								Showing love	1	
138	Best girl friends	1										
139	Dancing	1										
140	Dancing girls with bunny ears	1										

For the first survey, there was a mean of 17.76 different answers per emoji with a standard deviation of 7.8 answers, indicating that, while there was some variety in how many answers were given, for the most part there was a high amount of different answers given. In fact, only seven out of the fifty one emoji tested in the first survey resulted in less than ten answers, indicating that there were very few that were even generally agreed upon. These emoji, such as ⚾ and 🍍 , were a common nouns that were, as will later be seen, never used to represent connotations, emotions, or alternate meanings.

Table 1: Most Common Responses

Emoji	Number of Answers	Most Common Responses
⁉️	33	disbelief, omg
🙈	32	embarrassed, see no evil
😏	32	smirk, sneaky, hmm
😁	31	happy, eep

‼️		30	100 percent, one hundred
😂		29	laughing so hard you're crying, hahaha
🙃		28	upside down smiley face, welp
📉		28	graph, chart, downhill
💃		27	dancing, dance
👫		25	couple, a couple, friendship
🙌		24	praise, hallelujah, thank god
🌆		24	city, the city, skyline
🔀		24	shuffle, switch
🍻		22	cheers, beer
😍		22	love, in love, heart eyes
💸		21	money, spending money
👯		21	twins, best friends
🏃		20	running, run
✅		20	check, done
❄️		19	snowflake, snow
😷		18	sick, gross
💛		18	love, heart
✈️		18	airplane, plane

🎉	18	party, celebration
🏆	17	trophy, winner
🌿	17	leaves, plant
🎈	18	balloon, celebration, celebrate
😎	17	cool, cool man
⬅️ BACK	16	back, go back
💩	16	poop, shit
❓	15	question mark, question
❌	14	no, wrong
❤️	14	love, heart
🏝️	13	island, beach
⛈️	13	storm, lightning
🎶	13	music, listening to music
☀️	12	sun, sunny
👑	12	queen, crown
💡	12	idea, lightbulb
🍝	11	spaghetti, pasta, noodles
🚙	11	car, blue car
🖥️	11	computer, tv

🌍	10	world,earth
💇‍♀️	9	haircut, cut
☕	9	Coffee
🏡	9	home, house
🎄	8	Christmas tree, Christmas
🐶	8	puppy, dog
⚾	7	baseball, sports
🍩	4	donut, donuts
🍍	3	pineapple, pineapple/fruit, cool!

There were some answers that seemed to be almost exactly the same except for minute differences in spelling. These differences were consolidated to one of the original forms; all of the consolidations performed can be seen in the table below.

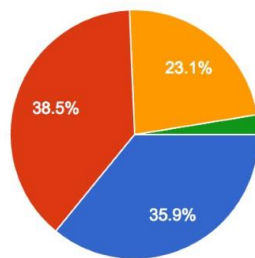Table 2: Differences and Consolidations

Initial Differences	Consolidated Form
Whelp, Welp	Welp
Sick, Sickk	Sick
Hahahaha, Hahaha	Hahaha
Hair cut, Haircut	Haircut
Ayyy, Ayye	Ayyy

In order to ensure that these differences in spelling rather than meaning did not skew the results, the measures of central tendency were recalculated after these answers were consolidated. This

recalculation led to almost no difference: even when minute spelling differences were not distinguished, there was still a mean of 17.69 answers and a standard deviation of 7.72 answers; and only eight of the fifty one emoji tested had fewer than ten different responses. This indicates that, while spelling differences may play a small part in the variety of answers given, they are by no means what is causing the high variety in response.

It is important to note that, while spelling changes were consolidated, things like differences in the presence of articles or punctuation were maintained as distinct because they indicate a functional difference in what the emoji represents to a specific user. For example, "couple" and "a couple" were kept as different results, as were "run!" and "run."

The analysis for the second survey, while a bit more complicated, followed approximately the same procedures as the first. The open-ended questions were re-entered in an Excel sheet, while the multiple choice questions could be analyzed straight from the Google Form because of their clearer format.

The multiple choice emoji-to-English questions included the only question with 100% consensus (seen below).

7. Imagine that you receive the following text. What do you think the sender is saying? Translate to English as best you can 😃👨🏿😃👶➡️🏆💯🎉🍕
(39 responses)

- The boys with a baseball found a trophy and celebrated with pizza
- The boys brought a baseball to see 100 trophies and then ate pizza
- The boys played baseball and win the championship and celebrated with pizza
- The boys who play baseball went to the hall of fame and then ate pizza

100%

Of the other questions of this type, two contained three options that were seen as viable and clear majority answers, and one (question six) contained four answers that were all used and that had a relatively even divide in agreement.

6. Imagine that you receive the following text. What do you think the sender is saying? Translate to English as best you can 🔍📝📐👎💩
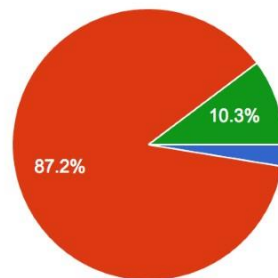(39 responses)

- I looked at the report and it was bad
- I did a research report and got a bad grade on it
- The research showed bad results
- I did research and it showed negative results about poop

23.1%
38.5%
35.9%

8. Imagine that you receive the following text. What do you think the sender is saying? Translate to English as best you can 💰💳➡️🎤🔑
(39 responses)

- I bought tickets to a concert that was awesome
- I spent a lot of money on tickets to an awesome concert
- I bought tickets to a concert where money flew
- I bought expensive tickets to really fun karaoke

10.3%
87.2%

9. Imagine that you receive the following text. What do you think the sender is saying? Translate to English as best you can 👨🏾👩🏼➡️🍮➡️👰🏼🎉➡️🎞️🏝️
(39 responses)

- The boy and girl got engaged, got married, and went on a cruise on an island
- The boy and girl found a ring, went to a wedding, and then went on a cruise to an island
- The boy and girl got engaged, got married and celebrated, and went o…
- The boy and girl went and got a ring, went and got married, then went to…

What may have set question six (the one with the most diverse and less agreed-upon answers) apart is that, while the emoji contained were not more or less agreed upon in the first section than those in the other questions, it did not use the ➡️[1], which may have been used to show transition from one event to the next, acting as a non-specific function morpheme. The ➡️ can be seen acting as a complementizer or other clausal connective in all of the other questions. It appears to represent "and then" (see question nine) or "to" (see question eight), indicating movement from one sequence to another, which may in turn help readers parse the strings of emoji into constituents or chunks that can be more easily understood. Function morphemes work as the "glue" of sentences in that they string ideas together, and that is exactly what the ➡️ appears to be doing in these cases.

The other multiple choice questions, in which English was translated to emoji, were less agreed upon than the previous set of questions. In five of the six questions all answer choices were utilized at least once and in the remaining question, three options were used. Only two of

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[1] For the emoji from the multiple choice questions present in the first survey, there was a mean of 22 different answers for those from question 6, 21 different answers from question 8, and 15 different answers from question 9. The number from question 6 is not significantly higher.

the question had clear majorities, and all of the other questions contained dispute between two

answers.

Table 3: Breakdown of Multiple Choice Responses

Question	Breakdown of Responses
Question 17: "Don't go to the city"	A. ❌🏃➡️🏙️ 15.8% **B. ❌🚙➡️🏙️ 44.7%** C. 🚙➡️🏙️❌ 7.9% D. ❌➡️🏙️ 31.6%
Question 18: "Don't get sick"	A. ✋😉😷😷 24.3% **B. ❌😉 64.9%** C. 😷🏥❌😉 0% D. 😉❌😷 10.8%
Question 19: "I went to McDonalds"	A. 👁️🚙➡️🍔🍟 28.2% **B. 🏃🚙➡️🍔🍟 38.5%** C. 👁️➡️🚙🍔🍟 12.8% D. 🏃➡️🚙🍔🍟 20.5%
Question 20: "Please give me a drink"	A. 🙇🍹 25.6% **B. 🍹🙇 28.2%** **C. 🙋🙇🍹 41%** D. 🙇🍹🙋 5.1%

Question 21: "The boy walked the dog"	A. 👦🏃🐶 17.9%
	B. 👦🚶🐶 71.8%
	C. 🐶🚶👦 2.6%
	D. 🚶👦🐶 7.7%
Question 22: "The boy and girl kissed"	A. 👦👧😘 43.6%
	B. 👦😽👧 48.7%
	C. 👧😽👦 7.7%

The open-answer questions contained very little agreement at all, regardless of whether the translation was to or from emoji. For the emoji-to-English questions, out of 195 total answers (39 responses to each of the five questions of this format), there were only five instances of two people giving the exact same answer, and one instance of three people doing so. All other cases were in some way distinct, whether in meaning, order, the presence/absence of function words and punctuation, or a combination thereof. Even for those that were similar in ultimate meaning, these differences in word choice and presence of components are important in indicating what emoji have the power to represent so, much like the similar examples from the first part of the survey, they were kept separate in analysis. For example, in question four (included below), the sentence was interpreted to relate to "the house," "my house," and "your house" based on the exact same emoji, indicating what can be seen as a significant difference in meaning based on the same emoji. Though some languages do simply have a general possessive marker, this is just one of many significant ambiguities of its type that were found in this section.

4. Imagine that you receive the following text. What do you think the sender is saying? Translate to English as best you can 🎉🕺🍻🏠⁉️

Short answer text

There was marginally more agreement for the English-to-emoji questions than for the emoji-to-English translation: there were fourteen instances of two people agreeing exactly, one example of three agreeing, and one of four. This may be due to the fact that there are fewer symbols to choose from when translating to emoji, rather than from. Interestingly, by far the highest level of agreement was in the "can't translate" response, whose minimum was higher than even the greatest agreement for an emoji answer. As a reminder, for the open-answer questions translating from English to emoji, there was a similar lack of direct consensus, but with an added twist: for this group of questions, each prompt contained a reminder that they could write "I cannot translate this sentence into emoji" should they be at a complete loss as to how to translate the phrase. Every single question had a decent presence of this answer, with a minimum of five "can't translate" in one question, a maximum of fourteen in another, and a mean of 7.86 "can't answer" responses per question. I believe that the amount of participants who refused to answer was relative to the presence of non-physical concepts in the question, as some questions were designed to contain less concrete ideas such as "to be," "to wish," or "enough," that were suspected to be harder to translate to emoji. This indicates that emoji are not as conducive to phenomena that are not easy to represent physically, indicating a possible limitation of their use. It is also possible that there is just a higher level of "cannot translate" for concepts and objects not directly represented in the set of emoji.

Based on the results from both the individual emoji and phrase surveys, I believe that there is very little consensus among users as to the meaning of emoji, and it is not sufficient to be characterized as a language based on the criteria set forward in this paper (that a language must have a grammar and a syntax, as well as consensus in meaning between users). If there is so much disagreement on both the individual level and the phrasal level, it is immensely challenging to be sure that a reader, whether known or not, is going to interpret an emoji message the way it was intended by the writer. Emoji, as they currently stand based on these results, do not represent an effective or efficient way to communicate meaning. As noted in the introduction, consistency assigned to meaning mapping is a core property of language, and emoji cannot be fully considered a language when their use in conversation is so inconsistent. While there is some ambiguity present in all language, the large degree of ambiguity present in emoji is what distinguishes them – it is not even an issue of pragmatics here, but rather an issue of fundamental meaning. The degree of disagreement, rather than the presence of disagreement, is what sets emoji apart and makes them especially risky and ineffective in communicating meaning.

Research Question 2: Did people use emoji the same way in both surveys?

Using Excel, a cross-analysis of use in the first and second sections was also created for each question and each participant. After looking at a participant's use of an emoji in the first and second sections, it was categorized in the table as either "consistent," "inconsistent," or "debatable." For example, when participant two described the 💇 as "haircut" in the first section and then again as "haircut" in response to question five of the second section, this can be

considered a "consistent" use. On the other hand, when participant eight described [hospital mask] as meaning "gross" in the first section but as "sick" in question eighteen of the second section, this would be considered "inconsistent." Essentially, unless the same word was used in the two responses, it was not considered "consistent," but either "inconsistent" or "debatable" based on how closely the meanings related. Recognizing that consistency is not binary and that there is room for interpretation, the "debatable" category was given in instances in which the two uses were very close, or the use in the first section was represented in the overall impression of the second section though not necessarily in the same place syntactically- this was done to take into account the possibility of a difference in syntax rather than meaning. The "proportion consistent" column of the analysis was calculated using only the "consistent" category, rather than also including the "debatable" category, in order to err on the side of caution in determining consistent use.

Sample of the Excel sheet of cross-analysis

	Same? Y/N	Cheesin face	Hospital Mask	Running Man	Dancing Lady	Downward Graph	City	Party	Red X	Flying Money	Haircut	Two beers	Baseball	Island	Ho
36	52 N	N	N	N	N	N	N	1 of 3	N	N	Y	N	Y	N	N
37	53 N	N	N	Y (general sentiment)	N	N	2 of 3	N	N	Y	Maybe (general idea)	Y	N	N	
38	54 Y	N/A	N	Y	M	Y	1 of 3	"Don't" (N)	N	Y	N	Y	N	N	
39	55 N	Y	N	N	N	N	1 of 3	N	N	Y	Y	Y	Y	N	
40	69 N	N	N/A (didn't use)	Y	N	N	Y	"Don't" (N)	N (not in the same ordering)	Y	Y	Y	N/A	N	
41 Consistent	8 of 38	9 of 38	0 of 38	14 of 38	3 of 38	17 of 38	4 of 38	1 of 38	2 of 38	33 of 38	7 of 38	35 of 38	12 of 38	8 o
42 Inconsistent	23 of 38	26 of 28	24 of 38	21 of 38	30 of 38	20 of 38	3 of 38	36 of 38	31 of 38	4 of 38	23 of 38	2 of 38	16 of 38	29
43 Debatable	6 of 38	0 of 38	0 of 38	1 of 38	4 of 38	0 of 38	30 of 38	0 of 38	5 of 38	0 of 38	7 of 38	0 of 38	0 of 38	0 o
44 N/A	1 of 38	3 of 38	14 of 38	2 of 38	1 of 38	1 of 38	1 of 38	1 of 38	0 of 38	1 of 38	1 of 38	1 of 38	10 of 38	1
45 Proportion Consistent	0.211	0.237	0	0.368	0.079	0.447	0.026	0.026	0.053	0.868	0.184	0.921	0.316	

As was demonstrated in the previous section, there was little discernable agreement as to an agreed-upon meaning for many of the emoji in the survey. As such, the analysis of this section focuses on a comparison of individual answers rather than general trends, because it was very challenging to determine a trend in meaning when the meaning could not even be agreed

upon initially. It is also important to note that one response was discounted as an outlier because the participant only answered two of the questions, therefore providing data that would have skewed the results for the majority that were left unanswered.

Based on the proportion of questions answered correctly (the "proportion correct" column), generally low levels of consistency were observed. The maximum number of questions answered consistently per individual was 10 out of 21, the minimum was 2 out of 21, and the mean number of questions answered consistently was 4.807 of 21, indicating a trend towards less consistency still. For the sake of thoroughness, all of the summary statistics were also calculated incorporating both the "consistent" and "debatable" columns, to see what would happen if a more general view of consistency in meaning was taken. The maximum (13 of 21), minimum (4 of 21), and mean (7.568 of 21) did all increase, and the minimum was no longer held by the same participant, indicating that some people may just take a wider view of consistency in meaning than others while still intending to send the same message. However, many of the meaning agreements from the "debatable" column were due to the presence of the meaning of the overall impression rather than a similar meaning actually being present in the phrase so this is subjective and open to conjecture.

It was also investigated whether or not there was a trend towards more general use in the phrasal section than in the individual emoji section. In order to make it a condition of something more than just personal discretion about generality, relationships were only considered more general if one of an individual's responses was a subset of their other answer (for example, "dog" and "puppy"). It was found that this trend was only present 14% of the time when the relationship was deemed "debatable" in analysis, indicating that the trend towards generality was

not as strong as anticipated by the author[2]. It is possible that based on other interpretations of generality the trend would be stronger, but this particular definition of generality does not give any more reason to how users are inconsistently using emoji.

Overall, based on the original "proportion correct" measurement, people did not use emoji the same way between the two surveys. Less than half of the participants answered consistently in each question, and no participant answered over half of the questions consistently. This, compounded by the lack of consistency in meaning between users, indicates that there is very little certainty in the interpretation of emoji meaning, further indicating that it is not yet ready to be deemed a language according to the criteria of this paper.

Research Question 3: Are people translating directly, or are they allowing for possibility of different word order?

The second survey contained many questions specifically designed to test whether emoji have their own word order, or whether they simply maintain the ordering system of English (in this case, the language that they are being translated from). These questions were also analyzed and summarized in a chart that shows what proportion of the ordering stayed the same throughout translation and what proportion changed. That table and the questions it refers to can be seen below:

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[2] Out of 519 total "debatable" answers, only 72 fell into the category of subset relationships

9. Imagine that you receive the following text. What do you think the sender is saying? Translate to English as best you can 👨🏾👶🏻➡️💍➡️👰🏼🎉➡️🎬🏝️

○ The boy and girl got engaged, got married, and went on a cruise on an island

○ The boy and girl found a ring, went to a wedding, and then went on a cruise to an island

○ The boy and girl got engaged, got married and celebrated, and went on a honeymoon to an island

○ The boy and girl went and got a ring, went and got married, then went to a cruise on an island

17. Imagine if you were trying to send a text with the following meaning- how would you do so using only emoji? "Don't go to the city"

○ ❌🚶➡️🏙️

○ ❌🚙➡️🏙️

○ 🚙➡️🏙️❌

○ ❌➡️🏙️

18. Imagine if you were trying to send a text with the following meaning- how would you do so using only emoji? "Don't get sick"

○ ☝️🤧😷😷

○ ❌🤧

○ 😷🏥❌🤧

○ 🤒❌😷

20. Imagine if you were trying to send a text with the following meaning- how would you do so using only emoji? "Please give me a drink"

○ 🙏🍹

○ 🍹🙏

○ 🤲🙏🍹

○ 🙏🍹🧑 (assuming the speaker a girl)

· · ·

21. Imagine if you were trying to send a text with the following meaning- how would you do so using only emoji? "The boy walked the dog"

○ 👦🚶🐶

○ 👦🚶🐶

○ 🐶🚶👦

○ 🚶👦🐶

22. Imagine if you were trying to send a text with the following meaning- how would you do so using only emoji? "The boy and girl kissed"

○ 👦🧑💋

○ 👦💋🧑

○ 🧑💋👦

Table 4: Proportion of Consistency in Ordering

Question Number	Kept Same Ordering	Different Ordering
9	1	0
17	0.9211	0.0789
18	0.8919	0.1081
20	0.7179	0.2821
21	0.8974	0.1026
22	0.4359	0.5641

As can be seen, the vast majority of the questions maintained the same syntax as their English

counterpart. While this indicates that they may be borrowing the SVO (subject-verb-object)

order of English, it does not mean that emoji do not just also use an SVO order. The only

exception to this (question 22, where the majority did not keep the same syntax) was specifically

designed to exemplify a more ambiguous structure, containing two subjects and one verb that

could not be as easily represented linearly. The fact that there was a sharp (and nearly even)

divide between those who stayed and strayed from English ordering could be indicative of the

inability of emoji to deal with more complex or abstract thoughts. This could also be an example

of emoji attempting to have their own grammar that more effectively represents the phrase than

linear structure, breaking off from the SVO order that was initially transferred over from English.

I do not think it is a coincidence that disagreement heightened when straight and distinguishable

SVO order was no longer possible because of the presence of two subjects.

22. Imagine if you were trying to send a text with the following meaning- how would you do so using only emoji? "The boy and girl kissed"

○ 👦👧💋

○ 👦💋👧

○ 👧💋👦

It could be that the majority of the time emoji just use the syntax of English, but that when the grammar of emoji tried to branch away, such as in question 22, there was no agreement. Should this be the case, emoji could be on their way to having their own grammar, but there is not enough agreement about the grammar and ordering of more abstract or complicated questions at the present time.

This also brings up questions of parsing, or how phrases are organized or divided up, in emoji. Is there a unit bigger than one symbol but smaller than a string that is being used to influence order here? Once again, the ➡️ mentioned in the first research question could be the answer we are looking for: by acting as a function morpheme and showing when one action is complete and moving on to the next, it is parsing phrases into units that are ordered together, as well as units of meaning that could lead to a more uniform way of interpreting strings of emoji. This would also be helpful in questions of productivity, or the ability to create original phrases and have them be understood, because the use of the ➡️ to create units of meaning would eliminate significant amounts of ambiguity.

Case study: wine and babies

In order to demonstrate the intersection of many of the phenomena mentioned abstractly above, I find it easiest to turn to an example. For this demonstration I will be using question three, an open-ended emoji-to-English question that was presented in the following way:

> ### 3. Imagine that you receive the following text. What do you think the sender is saying? Translate to English as best you can 👩🍷🍼🙏
>
> Short answer text

As with some of the questions found in the second survey, this phrase was obtained from actual use on the internet, giving us an interesting opportunity to know exactly what the original speaker wanted it to mean (which, as we have now learned, is not always something that we can guess). This phrase was originally used to mean "can I have a bottle of wine please?", which can be understood logically based on the emoji selected. Only four answers from the survey understood this meaning, and only one of them understood that it was phrased as a question:

- "I would like a bottle of wine, please"
- "I'd like wine from a bottle please"
- "I want a bottle of wine please"
- "Can you bring me a bottle of wine please?"

Of all of the answers given, only eight of them included the word bottle, though seventeen of them included mentions of moms, babies, or baby bottles, indicating that for many participants this was interpreted as a literal baby bottle rather than connecting 🍾 with the idea of wine. In terms of overall impression, answers ranged from positive and enthusiastic ("Wine night

please!") to negative ("I need some wine to deal with kids" and "Moms drink when babies sleep"), demonstrating almost opposite sentiments interpreted from the same set of emoji. One participant even included a hashtag in their interpretation, saying "I want a wine bottle. #praying", demonstrating that for this user, emoji can express not only full phrases and punctuation but internet speak and pragmatic meaning as well. A couple people interpreted the

🙇 to mean "prayer hands" rather than "please," demonstrating a common debate within emoji users (one that I have seen repeatedly on the internet) as well as the ability of one emoji to signify multiple distinct things. Finally, in a culmination of many of the aforementioned phenomena, one respondent interpreted the phrase as "went out to drink, got pregnant, praying to god." It is remarkable that all of these meanings came from only *one* string of four emoji, demonstrating the variety that exists in their use. If all of these interpretations can stem from the same string, can they really be unified enough in meaning (on an individual and sentence level) to be called a language? In addition to confusion over meaning as examined in the first research question, this demonstrates that users do not know how to form constituents (groupings of emoji that go together such as "wine" and "bottle") and that there is no specified order of interpretation, leading to the variety of responses seen here.

Table 5: Potential differences in parsing leading to differences in meaning interpretation

Interpretation as appears in survey results	Potential parsing for that interpretation
"I would like a bottle of wine please"	[[[🙋] [🍾 , 🍷]] [🙇]]
"I'd like a baby bottle of wine please"	[[[🙋][🍾 *, 🍷]][🙇]
"Who wants wine? I do. PLEASE"	[🙋 , 🍷] [🙇]
"Wine please and also milk"	?????

*lexical difference in the meaning of 🍾

Each of the above examples presents a confounding case. Though the first and second sentences have identical parsing, they interpret the exact same 🍾 in two distinct ways. The third interpretation separates one string of emoji into two entirely separate utterances, while leaving one of the emoji (🍾 un-interpreted entirely. More confusing than all of these, however, is the fourth string: there was not even a logical parsing that I could come up with. In addition to interpreting the emoji in a completely different order and not separately interpreting the first emoji of the string, the phrase "and also" used in the interpretation has no emoji representation at all- the interpretation is a severe departure from the emoji message. It is highly unlikely that this level of ambiguity and change would exist in a linguistically-based writing system.

Conclusion

Based on the characteristics identified as fundamental to language at the beginning of this paper, emoji are not a language. That is not to say, however, that they could not become a language in the future. There are many characteristics of emoji seen in this data that indicate that they are headed in the direction of becoming a language, such as the level of agreement that currently exists (and the even higher level when a generous view of agreement is taken) and the emerging unique grammar that could be seen in the analysis of question 22 in the last section. While these characteristics are not sufficient at the current time, as emoji are used more they could develop more characteristics that would allow them to become a language. Such characteristics include the use of more emoji as function morphemes (working in the way that ➡️ currently is), high levels of consensus between and within users, and the establishment of trends behind the generalization of meaning of emoji, as was seen in part two of the survey. This is not to say that emoji are guaranteed to develop in this direction and become a language, or even continue developing at all, but simply that the possibility is there.

Rather than a language, I believe emoji to be a semiotic system, or a system of signs. Semiotics is a larger field that encapsulates language, and emoji seem to fit: they are used to create meaning, and emoji are signs, or "something used in the place of something else" (Hérbet). Defining emoji as a semiotic system allows them to keep their status as a communicative system even though they are not a fully-fledged language. This does not mean to say that they are simple- many signs contain deeper meaning than we perceive initially. This also eliminates the problem of arbitrariness encountered in many definitions of language, as signs do not necessarily have to be arbitrary but can rather be iconic (Hérbet). Defining emoji as a

semiotic system eliminates many of the issues faced in the language definition, and simply makes a lot of sense.

Even more specifically, I believe that emoji are a pictographic system. Pictograms, or "picture writings," are images of the object that they represent, or "literal representations of the ideas to be communicated" (Fromkin & Rodman 1998: 493-494). Like language a type of semiotic system, there is no need for pictographic systems to be arbitrary, as they represent objects themselves rather than the linguistic names given to things- exactly like emoji. Pictographic systems are technically not writing systems "because they do not represent language," which works especially well for emoji because they are never written from scratch at all (Dawson & Phelan 2016: 612). It is even mentioned that "pictograms are used today in international road signs where the native language of the region might not be adequate…because they do not depend on the words of any language;" this phenomena has already been seen with emoji in international flashcards used to communicate in linguistically unknown lands (refer to the literature review for details) (Fromkin & Rodman 1998: 494). Rather than forcing emoji into the characteristics of language, defining them as a system of pictograms fits with the characteristics that are actually present in emoji now. That being said, many pictographic systems later evolved into full-fledged writing and language systems, so that possibility has not been eliminated. Egyptian hieroglyphics, for example, began as a semiotic system and became a language after processes such as semantic extension, in which they came to represent more than just one concrete object as well as different parts of speech (Dawson & Phelan 2016: 613). This has arguably already begun in emoji, such as with the as it has taken on a morphological role, and could be an indication that emoji are heading in that direction.

Emoji's lack of status as a language in no way undermines their importance as a communication system or the effect that they have had on technological platforms of communication, allowing greater emotions and ideas to be added to the messages that they fill. I do hope, however, that by acknowledging that they are not a language, people will realize that they are not a substitute for a language either. Communicative objects such as flashcards that use emoji to communicate in foreign lands or entire literary works translated into emoji are helpful on the surface, but the ambiguity that emoji contain means that they are not a long-term solution to intercultural communication in their current form. The faith that many users seem to have in emoji to transcend time, space, borders, and people may be unfounded. Were emoji simply being used to communicate between two speakers who likely know each other, the high level of ambiguity they possess would not be as important as it is in these large-scale communication situations. This study was specifically designed with little to no context given for the messages to see how that type of situation would play out, and the results have spoken for themselves. Many are hailing emoji (as they should, because they are innovative and fun) but I fear that people are not acknowledging their limitations as well, thinking of them as a solution to all of our communication problems. This level of faith is dangerous, and could lead to some pretty serious miscommunication based on differences in meaning and understanding.

In an emerging field such as the investigation of emoji, there is a myriad of directions for future studies. In relation to this study specifically, it would be interesting to reproduce this study, but with another language taking the place of English to see if there are different results than when translating from Emoji to English and vice versa. It would also be helpful to reproduce the study using another pictographic system, such as highway signs, to see how similarly the results mirror those of emoji. Observing the similarities in behavior of other

language and other pictographic systems would help to expand on the base this study has created, to either cement or change the ideas presented. Finally, as was mentioned in earlier analysis, it would be enlightening to look into whether there is a higher rate of inability to translate emoji that are not directly represented in the set present on most Apple devices, or whether the phenomenon found in our study was due to the use of less physically concrete terms.

Finally, I would like to reiterate that all of the conclusions of this paper are based only on the definition of language that I have adopted. Were one to use a different definition, the results might indicate different things. There is no way to avoid giving parameters to language in this way, but it is important to recognize that these results are not the be-all-and-end-all on the subject. Emoji are a complex communication system that require a great deal of analysis that I, among others, hope to continue in the future.

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All emoji used with permission from Apple.

Appendix

Emoji Survey Part 1

Please answer the following questions in a word or short phrase. Take all of the time you need. Thank you!

What is your survey number?

1. How would you translate this emoji into English? 😎

2. How would you translate this emoji into English? 😍

3. How would you translate this emoji into English? 😮

4. How would you translate this emoji into English? 😷

5. How would you translate this emoji into English? 😁

6. How would you translate this emoji into English?

🙌

7. How would you translate this emoji into English?'

😂

8. How would you translate this emoji into English?

9. How would you translate this emoji into English?

10. How would you translate this emoji into English?

11. How would you translate this emoji into English?

12. How would you translate this emoji into English?

13. How would you translate this emoji into English?

14. How would you translate this emoji into English?

15. How would you translate this emoji into English?

16. How would you translate this emoji into English?

17. How would you translate this emoji into English?

18. How would you translate this emoji into
English?

🎉

19. How would you translate this emoji into
English?

❌

20. How would you translate this emoji into
English?

🩹

21. How would you translate this emoji into
English?

👢

22. How would you translate this emoji into
English?

💁🏻‍♀️

23. How would you translate this emoji into
English?

💡

24. How would you translate this emoji into
English?

❤️

25. How would you translate this emoji into
English?

🍻

26. How would you translate this emoji into
English?

❄️

27. How would you translate this emoji into
English?

😏

28. How would you translate this emoji into
English?

🌿

29. How would you translate this emoji into
English?

👑

30. How would you translate this emoji into
English?

⚾

31. How would you translate this emoji into
English?

🏞

32. How would you translate this emoji into
English?

🔀

33. How would you translate this emoji into
English?

🏡

34. How would you translate this emoji into
English?

💯

35. How would you translate this emoji into
English?

✔

36. How would you translate this emoji into
English?

❓

37. How would you translate this emoji into
English?

🏆

38. How would you translate this emoji into English?

39. How would you translate this emoji into English?

40. How would you translate this emoji into English?

41. How would you translate this emoji into English?

42. How would you translate this emoji into English?

43. How would you translate this emoji into English?

45. 44. How would you translate this emoji into English?

45. How would you translate this emoji into English?

46. How would you translate this emoji into English?

47. How would you translate this emoji into English?

48. How would you translate this emoji into English?

💩

49. How would you translate this emoji into English?

🚙

50. How would you translate this emoji into English?

☀️

51. How would you translate this emoji into English?

‼️

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Emoji Survey Part 2

Please answer the following questions as accurately as you can, and take all of the time you need. Thank you!

What is your survey number?

1. Imagine that you receive the following text.
   What do you think the sender is saying?
   Translate to English as best you can

🆕 💿 ➡️ 👾 🔥 🎯

2. Imagine that you receive the following text.
   What do you think the sender is saying?
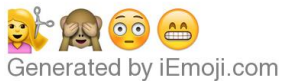   Translate to English as best you can

😖 💊 👉 👕

3. Imagine that you receive the following text.
   What do you think the sender is saying?
   Translate to English as best you can

🙋 🍷 🍼 🙏

4. Imagine that you receive the following text.
   What do you think the sender is saying?
   Translate to English as best you can

🎉 💃 🍻 🏡 ⁉️

5. Imagine that you receive the following text.
   What do you think the sender is saying?
   Translate to English as best you can

💇 🙈 😳 😁

6. Imagine that you receive the following text. What do you think the sender is saying? Translate to English as best you can. 🔍📝📈👎💩

○ I looked at the report and it was bad

○ I did a research report and got a bad grade on it

○ The research showed bad results

○ I did research and it showed negative results about poop

7. Imagine that you receive the following text. What do you think the sender is saying? Translate to English as best you can 👦🧑👦⚾➡️🏆💯🎉🍕

○ The boys with a baseball found a trophy and celebrated with pizza

○ The boys brought a baseball to see 100 trophies and then ate pizza

○ The boys played baseball and win the championship and celebrated with pizza

○ The boys who play baseball went to the hall of fame and then ate pizza

8. Imagine that you receive the following text. What do you think the sender is saying? Translate to English as best you can 💰🎫➡️🎤🎷

○ I bought tickets to a concert that was awesome

○ I spent a lot of money on tickets to an awesome concert

○ I bought tickets to a concert where money flew

○ I bought expensive tickets to really fun karaoke

9. Imagine that you receive the following text. What do you think the sender is saying? Translate to English as best you can. 👦👧➡️💍➡️👰🎉➡️🖼️🏝️

○ The boy and girl got engaged, got married, and went on a cruise on an island

○ The boy and girl found a ring, went to a wedding, and then went on a cruise to an island

○ The boy and girl got engaged, got married and celebrated, and went on a honeymoon to an island

○ The boy and girl went and got a ring, went and got married, then went to a cruise on an island

10. Imagine you were trying to send a text with the following meaning- how would you do so using only emoji? "I hate cats"
If you cannot answer the question, you may write "I cannot translate this sentence into emoji"

11. Imagine if you were trying to send a text with the following meaning-how would you do so using only emoji? "I am going to Hawaii for vacation next week"
If you cannot answer the question, you may write "I cannot translate this sentence into emoji"

12. Imagine if you were trying to send a text with the following meaning-how would you do so using only emoji? "I really want a donut"
If you cannot answer the question, you may write "I cannot translate this sentence into emoji"

13. Imagine if you were trying to send a text with the following meaning-how would you do so using only emoji? "To be or not to be, that is the question"
If you cannot answer the question, you may write "I cannot translate this sentence into emoji"

14. Imagine if you were trying to send a text with the following meaning-how would you do so using only emoji? "My car broke and now I have to spend a lot of money to fix it."
If you cannot answer the question, you may write "I cannot translate this sentence into emoji"

15. Imagine if you were trying to send a text with the following meaning-how would you do so using only emoji? "I went on a date with him and it was awkward"
If you cannot answer the question, you may write "I cannot translate this sentence into emoji"

16. Imagine if you were trying to send a text
    with the following meaning- how would you
    do so using only emoji? "I wish I was brave
    enough to talk to him."
    If you cannot answer the question, you may write
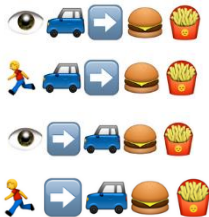   "I cannot translate this sentence into emoji"

17. Imagine if you were trying to send a text with the following meaning- how would you do
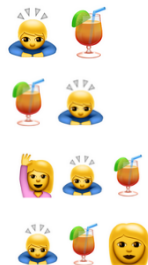   so using only emoji? "Don't go to the city"

    ❌ 🏃 ➡️ 🏙️
    ❌ 🚙 ➡️ 🏙️
    🚙 ➡️ 🏙️ ❌
    ❌ ➡️ 🏙️

18. Imagine if you were trying to send a text with the following meaning- how would you do
    so using only emoji? "Don't get sick"

    ✋ 🤒 😷 😷
    ❌ 🤒
    😷 🏥 ❌ 🤒
    🤒 ❌ 😷

19. Imagine if you were trying to send a text with the following meaning- how would you do
    so using only emoji? "I went to McDonald's"

    👁️ 🚙 ➡️ 🍔 🍟
    🏃 🚙 ➡️ 🍔 🍟
    👁️ ➡️ 🚙 🍔 🍟
    🏃 ➡️ 🚙 🍔 🍟

20. Imagine if you were trying to send a text with the following meaning- how would you do
    so using only emoji? "Please give me a drink"

    🙇 🍹
    🍹 🙇
    🙋‍♀️ 🙇 🍹
    🙇 🍹 👱‍♀️

21. Imagine if you were trying to send a text with the following meaning- how would you do so using only emoji? "The boy walked the dog"

🐶 🏃 😏

😏 🚶 🐶

🐶 🚶 😏

🚶 😏 🐶

22. Imagine if you were trying to send a text with the following meaning- how would you do so using only emoji? "The boy and girl kissed"

😘 👱‍♀️ 👱‍♂️

👱‍♂️ 😚 👱‍♀️

👱‍♀️ 😚 👱‍♂️