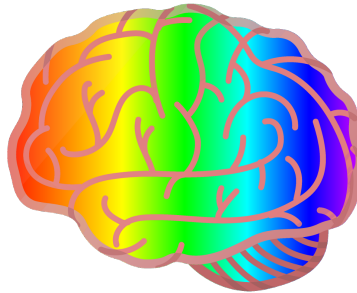# Proposal for NEURODIVERSITY Emoji

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July 13, 2018

I am proposing an emoji sequence for **NEURODIVERSITY**

Figure 1: **NEURODIVERSITY**

Autism (often referred to as Autism Spectrum Disorder) refers to a spectrum of characteristics that are the result of a neurologically atypical brain. Typical characteristics include repetitive behaviors, differences in language processing, difficulty in social interactions, and differences in how emotions and empathy are expressed.

The center for disease control estimates that roughly 1 in 59 eight year olds is autistic[1]. Generally boys are more likely to be diagnosed as autistic than girls, though that may be due to differences in social constructs regarding the expected behavior of boys and girls resulting is a higher percentage of autistic girls going undiagnosed.

As online social networking makes it easier for autistic individuals to find each other, our positive identity as a demographic rather than a negative identity as a disorder is starting to grow.

We believe an emoji to express our neurodiverse identity, an emoji chosen by our community, is both warranted and will help us continue to identify each other and

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[1] https://www.autism-society.org/news/2018-cdc-autism-incidence-rate-statement-from-the-autism-society/

grow as a community, enabling us to receive the important peer support we often lack from society at large.

The primary difference between those who are autistic and those who are not is in how our brain works. A rainbow repesents the full spectrum of visible light. We believe a rainbow brain is a logical representation of the neurodiverse spectrum that makes up our community.

The unicode codepoint `U+1F9E0` is already used for a brain emoji. The unicide codepoint `U+1F308` is already used for a rainbow emoji.

The sequence of codepoints `U+1F9E0 U+200D U+1F308` could thus be an appropriate sequence to indicate a neurodiverse brain without the need for assigning a specific codepoint.

Conventions

This proposal is attempting to follow the proposal guidelines specified at `https://unicode.org/emoji/proposals.html` using the same section numbering scheme used in the form specification there.

Upper case bold text indicates the CLDR short name of an emoji. Monospace (typewriter) text beginning with `U+` indicates a Unicode codepoint. When referencing a CLDR short name for an existing emoji, usually it will be accompanied with the Unicode codepoint or sequence to avoid any possible confusion.

Hyperlinks where the text of the hyperlink is not the URL will have the URL specified in a footnote.

Section Six, 'Other Information' in the proposal form template, has been renamed to 'Selection Factors — Special Consideration'.

With the exception of an example of the proposed emoji which is required at the top of the document, all figures appear in Appendix A. This was done because some of the figures are referenced more than once, and to make it easier to note that the images in the figures are used under the Fair Use doctrine so that it is very clear the copyright to those images does not belong to me. I like to be very clear when it comes to intellectual property.

Sometimes I over-explain thing. It is an autism trait often known as 'data dumping' and is often frowned upon by those who are neurotypical. I have tried very hard not to do it here, but I ask for an ounce of grace if and when I over-explain something.

Community Participation

I, Alice Wonder, am only a *member* of the Autistic / Neurodiverse community.

This document was created on a Public Github[2] where any member of the community is free to either create issues or submit pull requests.

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[2] `https://github.com/AliceWonderMiscreations/NeurodiversityEmoji`

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Community participation has been sought at both Twitter and Facebook *er, will be...* before submission of this proposal to the Unicode Consortium to make sure this proposal is congruent with the those the emoji is intended to represent.

Document compile instructions to be removed before final submission.

For those familiar with LaTeX who wish to submit a pull request, this PDF document should compile with any somewhat recent version of TeXLive[3] as long as you have the LuxiMono[4] font pack installed. I believe all the other needed LaTeX packages are part of a standard TeXLive install.

The LaTeX files in the github repository are intended to be compiled into a PDF document using the following method:

```
pdflatex proposal.tex && pdflatex proposal.tex && pdflatex proposal.tex
```

For those not familiar with LaTeX just open an issue with the github project with your suggested changes.

Contents

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[3] https://tug.org/texlive/
[4] https://ctan.org/tex-archive/fonts/LuxiMono/

List of Figures

1. Identification

1.A. CLDR short name

The suggested CLDR short name: **Neurodiversity**

1.B. CLDR keywords

The suggested CLDR keywords: **Neurodiversity, Neurodiverse, Neurodivergent, Rainbow Brain, Autism, Autistic, ASD, Asperger**

2. Images

The images in this proposal are based on the Google® Noto Color Emoji[5] font.

It is recommended that existing fonts base their artwork on their existing glyph for **BRAIN** U+1F9E0. Monochrome versions of the glyph should just use their monochrome variant of **BRAIN** U+1F9E0 ignoring the rainbow modifier the same way many of them handle skin tone modifiers when in monochrome.

2.A. Zip File

A zip file can be downloaded from: NeurodiversityEmoji.zip[6]

2.B. License

The Emoji artwork is a derivative of the Noto Emoji **BRAIN** U+1F9E0 glyph which uses Apache License, version 2.0[7]. A copy of that license is included in the zip archive.

2.C. Document

The form for Emoji Proposals specifies that images for the proposed emoji be included at the top of this document in both 18x18 and 72x72 pixels.

The zip archive contains the concept art in 1024x1024, 128x128, and 72x72. An 18x18 sample is not included, that size does not make sense, especially when so many devices have a pixel density of 2:1 or greater.

With all due respect, that part of the 'Form for Emoji Proposals' needs to be modified. I do not even really understand what it is after, and several example proposals I looked at did not adhere to the text of that guideline. See the **PERSON MEDITATING**[8] sample proposal. The images there do not include 18x18 pixel images.

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[5] https://www.google.com/get/noto/help/emoji/

[6] https://github.com/AliceWonderMiscreations/NeurodiversityEmoji/raw/master/NeurodiversityEmoji.zip

[7] https://github.com/googlei18n/noto-emoji/blob/master/LICENSE

[8] http://www.unicode.org/L2/L2016/16279-person-meditating.pdf

Is it possible that 18 point and 72 point is what was intended? Those are common font sizes. However many (most?) emojis are not even remotely recognizable at 18 pixels by 18 pixels.

3. Selection Factors — Inclusion

3.A. Compatibility

Some members of the autistic / neurodiversity community currently use **BRAIN** `U+1F9E0` to indicate neurodiversity, as it is the closest emoji we currently have that expresses our emerging demographic identity. See figure 4.

3.B. Expected Usage Level

3.B.1. Frequency

A search on Twitter for the **BRAIN** emoji shows frequent, though not exclusive, use of that particular emoji in the context of neurodiversity.

A search on Twitter for the **JIGSAW** emoji showed some usage of the emoji in the context of neurodiversity, see figure 5.

With two different emojis being used in the context of neurodiversity that are not intended to convey neurodiversity, we believe there is sufficient demand for an emoji designed to represent our demographic.

3.B.2. Multiple Usages

There is at least one possible use for this emoji beyond neurodiversity.

Brain scans and instructive artwork for brains often use colors to indicate different things, whether it is neurotypical or not, see figure 6. It would not be surprising if some people in the field of neuroscience used this emoji sequence outside of the context of neurodiversity.

3.B.3. Use in Sequences

I believe this is not applicable.

This emoji is a proposed sequence. It may just be lack of imagination, but I am not able to conceive of any scenarios where additional sequences would be needed.

3.B.4. Breaking New Ground

This emoji *may* break some new ground.

There currently are not any emojis that exist for the purpose of identifying diversity inside a person. There are emojis for ethnic differences, gender differences, career differences, even hair style differences.

Nothing seems to exist for differences in people that are fundamentally internal yet are a huge part of who they are.

An argument could be made for the **NERD FACE** `U+1F913` and the **RAINBOW FLAG** `U+1F3F3` `U+200D` `U+1F308` having broken that ground already.

3.C. Image Distinctiveness

A rainbow is frequently used as a visual representation of a spectrum. A rainbow itself is created by diffraction of white light, allowing our eyes to interpret the individual wavelengths that make up the visible spectrum of light and see the beautiful diversity that actually exists within white light that we were unable to perceive without the diffraction of light.

It should not be too difficult for people to figure out the rainbow is acting as a diversity adjective to the **BRAIN** emoji and understand the neurodiversity context.

A rainbow flag is often used as a symbol of pride by the LGBTQIA and sometimes rainbow colors and patterns are used outside of the context of a flag to indicate LGBTQIA pride. However the **RAINBOW FLAG** sequence `U+1F3F3` `U+200D` `U+1F308` is more frequently used for LGBTQIA pride. I do not believe there will be much confusion.

3.D. Completeness

Not Applicable, this emoji is not part of a set.

3.E. Frequency Request

Not Applicable, I do not have any data on how often such an emoji is requested either of the Unicode Consortium or a Unicode member company.

4. Selection Factors — Exclusion

4.F. Overly Specific

This emoji sequence is suitable to indicate all forms of neurodiversity. It is not overly specific to any particular form of neurodiversity.

4.G. Open-ended

Neurodiversity is also often represented by a rainbow-colored mathematical infinity symbol, see figure 7 for an example.

The existing **INFINITY** `U+267E` `U+FE0F` specifies the symbol is enclosed within a circle or square, making it difficult to use with a rainbow modifier.

Using a rainbow infinity would probably require a new codepoint assignment to properly avoid that problem.

The stroke thickness may also cause issues with multiple colors at small sizes.

4.H. Already Representable

Some people are already using **BRAIN** `U+1F9E0` to represent neurodiversity, see figure 4. It works for the present but only indicates neurodiversity for those who already understand the context.

Some people are already using **JIGSAW** `U+1F9E9` to represent autism, see figure 5. When used in the context of autism it has trademark issues, and it excludes neurodiversity that is not autistic.

4.I. Logos, Brands, UI Icons, Specific People, Deities

To the best of my knowledge, the Rainbow Brain is not exclusive to any specific brand or person.

The blue puzzle piece that Twitter uses for **JIGSAW** `U+1F9E9` however is very similar to a trademark owned by Autism Speaks. See figure 2. Encouraging the use of a rainbow colored brain for neurodiversity would help avoid trademark issues.

4.J. Transient

As awareness of autism and other neurodivergent traits increase, the neurodiversity community will continue to grow, especially online where our social awkwardness is less of an issue. I expect use of this emoji to be of value for as long as people still populate the planet.

4.K. Faulty Comparison

In part, this request is in response to the additiom of the **JIGSAW** `U+1F9E9` emoji but only in the respect that an emoji for neurodiversity is needed, and the use of a puzzle piece to fill that need violates an existing trademark as well as identifying with a specific group that many in the neurodiverse community do not wish to be associated with.

4.L. Exact Images

This emoji sequence does not require an exact image. The existing **BRAIN** `U+1F9E0` glyph used by existing emoji fonts modified to use a rainbow is sufficient.

5. Sort Location

5.A. Category

Within the existing category list, this emoji sequence would be a best fit within the 'Body' category.

5.B. Comes After

Within the 'Body' category, this emoji sequence would be a best fit after the **BRAIN** `U+1F9E0` emoji this sequence is a variant of.

6. Selection Factors — Special Consideration

The emoji **JIGSAW** `U+1F9E9` was recently added to the Unicode Emoji list.

The organization Autism Speaks[9] uses a blue puzzle piece for their logo, see figure 2. Twitter uses a very similar blue puzzle piece for the **JIGSAW** emoji, see figure 3

The two are very similar and there is some considerable fear that people outside of the autism community will start to use that emoji when referencing autism.

Within the autism community (people who are actually autistic themselves) there is a lot of resentment towards that particular group as well as resentment towards using a puzzle piece to represent us.

For information on why many (though admittedly not all) within the autistic community dislike the Autism Speaks organization, see Why Autistic People Generally Dislike Autism Speaks[10].

For information on why many within the autistic community do not want to be represented by a puzzle piece, see The Problem with the Autism Puzzle Piece[11].

Whether or not that organization deserves that resentment from us though is not the issue. Regardless of those things, it is not a good idea for an emoji that is very close to the trademark of a specific autism related organization to be used for autism in the general sense.

The proposed **NEURODIVERSITY** emoji would give an alternative that will not be confused with the trademark of a specific autism related organization while at the same time giving our community an emoji to use that we specifically chose to identify with.

The proposed **NEURODIVERSITY** emoji avoids the potential misuse of the **JIGSAW** `U+1F9E9` emoji in the autism context it was not intended for.

A. Figures

Images used in these figures fall under the Fair Use doctrine of U.S. Copyright law.

Figure 2: Autism Speaks Logo

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[9] https://www.autismspeaks.org/

[10] https://neurodivergentrebel.com/2018/03/14/why-autistic-people-generally-dislike-autism-speaks/

[11] https://learnfromautistics.com/the-problem-with-the-autism-puzzle-piece/

Figure 3: Twitter Jigsaw Emoji

Figure 4: Autistic Twitter User with Brain Emoji. Notice the brain on her shirt is rainbow.

Figure 5: Autistic Twitter User with Puzzle Piece. Personal information about the user intentionally obfuscated.
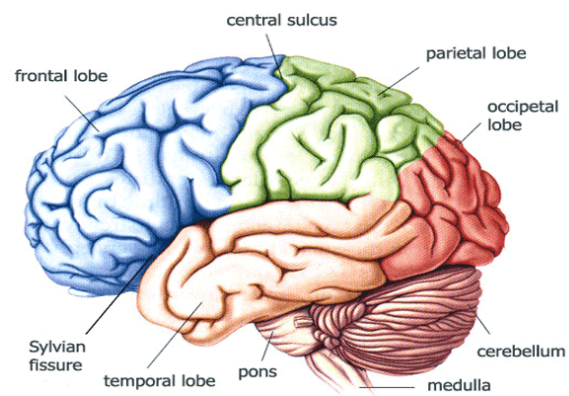

Figure 6: Instructive Drawing of Brain using Multiple Colors

Figure 7: Rainbow Infinity Loop