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## The Fable of Neuroplastic Lyra

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## The Fable of Neuroplastic Lyra

### Cover Page Footnote

Acknowledgements: To our daughter, Lyra. This fable stands on the shoulders of Bostrom's (2005) fable of the dragon tyrant. Thank you for opening our eyes to the possibilities of accessible and creative writing in academic journals. Thank you to Alex Higson for editing an early version of this article. Thanks to Maximin Lange, Lewis Burton, Juliet Foster, Sukhi Shergill and Oliver Runswick for your comments.

# The Fable of Neuroplastic Lyra

Ricardo Twumasi

Once upon a time, over 500,000 years ago, a child was born. Before this proto-human child came along, children were able to carry out some basic proto-human actions at birth. They were expected to walk and vocalize some basic howls and grunts.

But because of a genetic mutation, this child was born more helpless than any other child before her. She could not feed herself, howl, grunt or walk at birth. But this child was lucky; this child was born into the north tribe, a proto-human tribe that valued all children as a gift, no matter their abilities. The whole tribe had to pitch in to support this child. The tribe named her Lyra.

The first few months with Lyra were hard. Some in the north tribe wanted to leave Lyra out in the cold, as taking care of her cost the tribe dearly. Her crying attracted predators, someone always needed to be alert to her needs, and she offered nothing to the tribe but infant beauty and love. Love won out: the tribe struggled through the hardship and made it to the first summer with Lyra. When Lyra's first birthday came, her abilities slowly started to emerge.

It would have taken a neuroscientist or behavioralist of the modern era to have some understanding of what was happening within Lyra. But one day, when another tribe, the south tribe, came to engage in what could be considered a proto-version of trade or war, an elder began to see Lyra's abilities.

By the end of her second year, Lyra had learned most of the grunts and howls of the north tribe, her proto-language. And she had also learned some of the grunts, howls and songs of the birds and wolves that lived alongside the tribe. When the south tribe approached and left their tribute of wood and flint at the altar of the north tribe, they made the usual grunts and howls of the proto-language of the south tribe. No one from the north tribe understood their meaning or knew how to respond, other than by accepting the tribute

and feeling relieved that there was not war again, as sometimes happened around this time of tribute.

Lyra heard the proto-language of the south tribe and made a connection in her two-year-old mind to the sounds of the birds and wolves she heard. Lyra responded to this proto-language. If we were to use Gene Roddenberry's universal translator, the south tribe could be argued to have stated, "We give these tribute, so there no war." Lyra responded, in south tribe proto-vernacular, "Thank you. There be no war." This was the first time ever that a north triber had spoken to a south triber. The south tribe tribute-givers were in shock. They approached Lyra. Howls and grunts were made. Lyra repeated, "Thank you . . . no war." The south tribe fell to the ground, worshipping Lyra. They did not recognize this child. But it seemed as though Lyra were a child of the south tribe, and the south tribe also revered and valued their children.

Lyra soon became the ultimate diplomat. She could speak some basic parts of the south tribe language. How? Lyra's genetic mutation allowed for further neuroplasticity. This plasticity allowed her to learn the sounds of all the living beings around her and interpret their meaning. The north tribe made their proto-language from the songs of the birds. The south tribe made their proto-language from the howls of the wolves. The wolves and birds could not communicate with each other, but Lyra was able to make images in her plastic brain that gave meaning to the sounds of the wolves and the sounds of the birds. A Dr. Dolittle of sorts (although this Dr. Dolittle could not speak to the animals), she could understand the basic tenets of the language of another tribe she had never encountered.

The north and south tribes came closer together. There was never again war based on insufficient tribute from the south tribe, and the north tribe even began to share their resources of water and berries, which were more plentiful in the north. True trade was established, based on the trust that Lyra was both a child of the north and a child of the south.

Lyra went on to lead the combined north-south tribe, which named itself "Wolfsang." Lyra taught other members of the tribe a combined language that built on wolf and bird sounds but also had a whole host of sounds and concepts from Lyra's imagination and environment. That was Lyra's power. Her neuroplasticity allowed her to imagine and think in a way no

proto-human before her ever had. Lyra went on to biologically mother many children, sixteen in all, and to become alma mater for many hundreds of other children from Wolfsang.

Wolfsang were impossibly successful. Whenever they encountered a new animal or tribe, they had an uncanny ability to communicate with or understand them. They were true diplomats. They established trade, care and compassion for other tribes and animals. Other tribes revered Wolfsang; their ability to live in harmony with their environment seemed super-proto-human to onlookers.

The end.

*Author's Note: This fable stands on the shoulders of Bostrom's (2005) fable of the dragon tyrant.*

*Taking care of infants who are helpless for so long can offer both individuals and societies the superpower(s) of plasticity, adaptation, care, compassion and understanding that leads to interdependent behaviors that have the potential to weave humanity into a symbiotic relationship with the processes and organisms of this living planet (Lovelock, 2003).*

*The neurodiversity framework (Baron-Cohen, 2017) offers a new insight into differences previously viewed as conditions or disorders and allows us to use an empathetic psycho-social lens of disability to support neurodiverse individuals. Offering acceptance, love, support and compassion for neurodiverse individuals as they navigate this world that was not designed for them may be key in allowing the pattern seekers (Baron-Cohen, 2020) to transform this world for the better.*

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