

DEVELOPMENTAL TWISTS

The Italian Journey

Tsuku Mogami

February 14th, 2023. Candlelight, soft music, brushed table cloth. I've been waiting for this day all my life.

"More wine?"

"Don't mind if I do."

Yes, they're well on their way. Good to see how my final performance is proving to be such a success. Yet some of my cousins feel sorry for me. They think it sad I should be on the sidelines instead of in the thick of it. A defective who can't perform the vital act. But they're wrong: they're the ones who are trapped, desperate to satisfy their sexual needs. Better to be a bystander, enjoy the show and avoid complications, the indignity of being passed over for another. My ancestors were smart to abstain.

Did you know my ancestors can be traced back three millennia? Mentioned by Theophrastus (372-287 BCE). With their hundred or so attractive organs, they must have been so much more fragrant than their boring pentamerous cousins. No wonder they were selected for multiplication.

"You're looking wonderful this evening."

"Thank you."

Intertwined hands resting a few inches away from me. They'll be in each other's arms in no time. Satisfying to have helped that happen.

Yet what I'm proudest of is our contribution to developmental biology. It began at 3 am on the 3rd of September 1786. That's when Johann Wolfgang Goethe jumped into a coach, assumed a false name and set off for Italy. He'd just turned 37. Twelve years earlier he'd written a bestseller, *The Sorrows of Young Werther*, about unrequited love for a married woman. (See what I mean?

Complications, complications.) But fame proved too much for him, so he travelled to Italy incognito to get away from it all. Part way through his two-year Italian escapade, he had a flash of scientific insight while sitting in the public gardens of Palermo. He realised that all our organs, from nourishing green ones to the sexual, are nothing but variations on the same theme. He wrote up his ideas when he returned to Germany, in *The Metamorphosis of Plants* (1790). My ancestors played a star role, illustrating how sexual organs could be transformed into a proliferation of sterile equivalents.

For many years Goethe's ideas were treated with disdain by the scientific establishment: what could a romantic poet teach them? But in the 1980s, interest in his theories was rekindled. The genes underlying our organ transformations were identified, revealing the principles behind our body plan. Goethe's insights and his appreciation of how so-called aberrations can be informative were vindicated.

"How was your dessert?"

"Delicious."

Of course, they have no idea that a developmental mutant of the greatest biological importance is helping cement their romance. Too lost in each other's eyes.

Yet I do envy my cousins in one respect – at the end of the day I will wilt and die, while they'll carry on through their children. Still, I've enjoyed the show.

"It's been a wonderful evening. Can I walk you home?"

"Yes, thanks...only, wait a minute. This rose is so beautiful, I'd like to bring it home to take some cuttings."

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