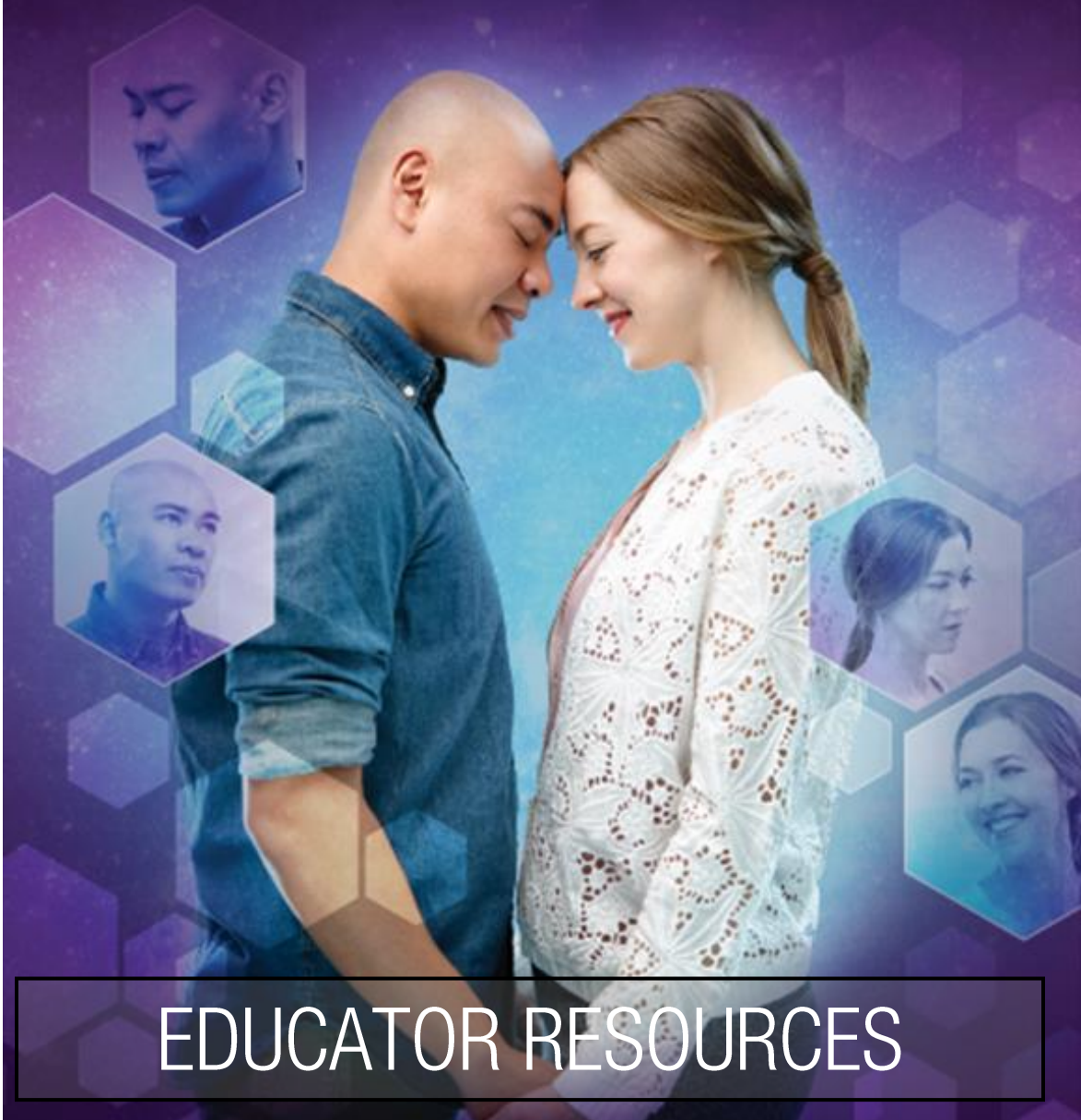




CONSTELLATIONS

BY NICK PAYNE



EDUCATOR RESOURCES

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by Nick Payne
Directed by Valerie Planche

STUDENT MATINEE | 11:30AM | THURSDAY March 8th, 2018

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Directors Notes – Constellations

I admit it! I'm a hopeless romantic.

As I get older, I become aware that my insides, my thoughts and how I perceive myself has not changed that radically since I was in my late 30's. My awareness grows and expands, I aspire toward discernment as opposed to judgment, but when I catch myself in the mirror, I am often surprised by what I see. My outer shell is getting older.

This duality is what connects me to this play.

I am the baby of my family. I lost my parents while in my 30's, and in the last 7 years I've lost 2 of my older brothers. Sometimes it feels like they were not real. Did I make them up? Dream them? Then a day comes where I'm walking in the woods and I get a whiff of cedar, and I hear laughter. I am flooded by the memory of my parents sitting on the front steps with the parent neighbors, the teens hanging out, and as us little kids playing hide and seek under the massive cedar hedges on a hot Montreal night. In that moment they are a part of me and also part of another time, another world...



Nick Payne wrote this play after his father's death, during which he met his future wife! The worst and best experiences happening at the exact same time. How does one let go AND allow in at the same time?

Often we can only see within our little bubble. We think the sun is at the center of the universe because it's the center of what we can see.

Payne invites us to imagine everything we're NOT seeing.

Inspired by science, this is a relationship play about moments when we make decisions, choices, consciously or unconsciously. It's also about the fleeting nature of this biological existence, life.

It's about consequence, chance, relationship, and love!

Hugh Everett in the 1950's suggests that, "... for every situation where there is a probability of outcome A or outcome B, both paths are followed but in separate universes – the universe splits and leaves 2 universes that continue to exist but can't communicate with one another."

What if, when someone dies, they still exist in another universe?...

I miss you Michael. Thanks for teaching me how to dance.

SYNOPSIS

Constellations is a spellbinding love story about an unlikely romance between Roland, a beekeeper, and Marianne, a physicist. After a chance encounter at a barbeque brings them together the possibility of a spark seems unlikely, but what happens next defies the limits of our understanding of time and space.



Unfolding in a series of parallel moments over the course of their relationship, the play explores the infinite trajectories that love can take to bring us together or pull us apart. It examines how every choice we make or don't make changes the outcome and can lead to another life. Love triumphs or falls on the phrasing of a sentence. It shows how all these possibilities are splayed out before us infinitely.

“every choice, every decision you’ve ever and never made exists in an unimaginably vast ensemble of parallel universes”

-Marianne



SETTING

This play takes place in a city in modern day. But it also takes place spanning multiple parallel universes in the multiverse. All these universes vary ever so slightly from each other but for the most part are the same.

STYLE

This play features two actors in a minimalist environment. It is acted in the style of realism despite the fantastic idea of parallel universes. Each universe is real to the people that inhabit it and it is their life. While the acting is realistic the design of the show is not. It gives us a vast ethereal space to play in and allows for the idea that nothing in our lives is entirely concrete. This also allows a design team to approach the script in a very different way each time the play is produced. Often scripts are written with the intent of being produced by various companies through the world. Good scripts will allow for different design elements to be altered and reinvented, making each reincarnation of the script unique and letting designers leave their own finger prints on the work.



The Cast, Crew and Design Team for *Constellations*

“I am enough of an artist to draw freely upon my imagination. Imagination is more important than knowledge. Knowledge is limited. Imagination encircles the world.”

— **Albert Einstein**

CHARACTERS

Marianne – Marianne is a theoretical physicist, fascinated by multiverse theories. She is passionate and driven and a fiercely intelligent scientist. Though she's a serious professional working in the top 1% of her field, she has a quirky, head-in-the clouds quality; friendly, warm, and quick-witted, comedic chops. Marianne is fact driven and doesn't open up easily. She prefers rely on her intellect and focus on science rather than getting her heart involved.



Roland – Roland is a charming, laid-back beekeeper; warm and open, with a good sense of humor, earthy and likable. He is consistent and more emotionally open than Marianne. He is inclined to give and receive love. He represents a more modern form of a classic romantic lead. He is kind, understanding and caring. He is able to bring out Marianne's romantic side when very little else can. He is portrayed as being less intelligent than Marianne but he is genuinely interested in her interests and wants to learn from her. He wants to learn what is important to her and that's what makes him a heartbreakingly romantic lead



ABOUT THE PLAYWRIGHT

Nick Payne



Nick Payne is a British playwright who studied at The Central School of Speech and Drama at the University of York. His play *If There Is I Haven't Found it Yet* was produced at the Bush Theatre in 2009 starring Rafe Spall and directed by Josie Rourke. Following this Nick was nominated for The Evening Standard Award for Most Promising Playwright in 2010, and won the George Devine Award. *If There is I Haven't Found It Yet* went on to be produced off Broadway at the Roundabout Theatre company starring Jake Gyllenhaal and Annie Funke and directed by Michael Longhurst.

Nick's play *Constellation* opened at Royal Court Upstairs starring Rafe Spall and Sally Hawkins and directed by Michael Longhurst. This production was transferred to the West End where it went on to win The Evening Standard Best Play Award and received a nomination for the Olivier Award for Best New Play. *Constellations* went on to Broadway starring Jake Gyllenhaal and Ruth Wilson, with Michael Longhurst staying on as director.

Nick Payne has also written for television, adapting *The Sense of an Ending* by Julian Barnes for BBC films which was released in March 2017.

DESIGN

Costume Design

by Hanne Loosen



Set Design
by David Fraser



THEMES AND TOPICS

Themes	
<p>Materialism vs. Humanism</p> <p>Challenging theatrical conventions</p> <p>Ambiguity and ambivalence</p> <p>The nature of truth</p> <p>Terminal illness and end of life</p> <p>Gender roles</p> <p>Love</p>	<p>Social relations</p> <p>Science / intellect</p> <p>The nature of love</p> <p>Time and space</p> <p>Multiple universes (infinity vs. the finite)</p> <p>Fate, chance and free will</p> <p>Meaning / purpose of life</p>
Post Show Discussion Topics	
<ol style="list-style-type: none"> 1) What techniques does the director use to show the shifts in universe? 2) How do Marianne and Roland deal with her diagnosis differently? 3) Discuss the arc of the story, and how the multiple universes add to it, or detract from it. 4) Consider the locations (a barbeque, an office, a ballroom dancing lesson.) What do the actors do that allows us to feel a change in setting? 5) How does the use negative space on stage (space that is not occupied) add to the piece as a whole? 6) Do Marianne and Roland have free will? 7) Do Marianne and Roland love each other? Are they destined to always love each other in every universe? 8) In what ways to the design choices and writing style challenge the typical conventions of the theatrical practise? 9) How would the play have been different if Marianne had been a beekeeper and Roland a scientist? Is the playwright making a comment on gender roles by casting them in their current occupations? 	

ADDITIONAL READING

Nick Payne: from one bereavement to endless universes

As his hit play *Constellations* opens in the West End, Nick Payne explains how his father's death led him to discover radical new theories about life.

By Nick Payne

6:59AM GMT 09 Nov 2012

Up until my play *Constellations* (now at the Duke of York's theatre, starring Sally Hawkins and Rafe Spall), I had resisted writing autobiographically. My previous plays had been personal, deeply personal in some instances, but I had never actively set out to dramatize or examine my own experiences.

Not long after the Royal Court Theatre commissioned me to write a new play, however, my dad died. He had been living with a heart condition for some time, but in early 2010 his health declined and I was told that he would never recover. There was, though, an operation that might prolong his life for another year or so.

Now a full-time resident at Watford General hospital, my dad geared himself up to have a particular kind of pacemaker fitted, one that would regulate his heart rhythm whenever it became erratic. During the operation, it was discovered that the arteries around his heart were too badly damaged to have the pacemaker installed, and the operation was aborted. He died days later.

Christmas 2010 was, understandably, a somewhat subdued occasion. Once *Top of the Pops* had finished, I found myself at a bit of a loss. I headed for the internet and began aimlessly Googling. I stumbled, if memory serves me right, by chance upon a three-part documentary by Brian Greene entitled *The Elegant Universe*; it was a revelation.

Over three hours, Professor Greene explored the incompatibility of general relativity and quantum mechanics, two cornerstones of modern physics. In essence, the emergence of quantum mechanics demonstrated that a number of general relativity's key concepts failed to have any meaning when applied to the realm of the microscopic. Gravity, for example, is a vital component of relativity, but is almost irrelevant at the level of atoms and molecules.

So vastly problematic was this disparity that Albert Einstein, inventor of general relativity, would spend the final 30 years of his career searching in vain for a way to unify the two theories. Towards the end of his life, Einstein would reflect, "All my attempts to adapt the theoretical foundation of physics to this new type of knowledge failed completely. It was as if the ground had been pulled out from under one, with no firm foundation to be seen anywhere, upon which one could have built."

He wasn't alone. For decades, the disparity between relativity and quantum mechanics would remain a mystery.

In the mid-Eighties a new theory emerged: superstring theory (or string theory for short). String theory posited that every particle known to us is comprised of minute, vibrating strings. The structural differences

between quarks, electrons and so on are a direct result of the vibrational differences between their respective strings. Crucially, the mathematics of string theory was at long last compatible with both general relativity and quantum mechanics.

There was just one problem: for the numbers to add up, we would need to accept that our universe was comprised of up-to-and-including 11 space-time dimensions. Pre-string theory, we had been operating under the assumption that there were a mere four; three of space and one of time. In short, we would need to accept that our universe might not be the only universe out there after all.

Appropriately, a multitude of multiverse theories began to materialise. As I waded through them, I too began to feel as if the ground had been pulled out from underneath my feet. I decided to contact a number of scientists, chiefly cosmologists and theoretical physicists, for help.

The first cosmologist I spoke to informed me that she felt all of the multiverse theories were “b-----supersized” (phew). However, only days later I would speak to a pro-multiverse cosmologist, his multiverse of choice being the Quantum Multiverse.

Uncertainty is vital component of quantum theory. By abandoning determinism and focusing instead on probability, quantum theory bravely asserted that certain aspects of Nature are simply governed by chance. If you were able to trap, for instance, a single electron inside a room with both collapsible walls and ceiling, you might think that you would then be able to pinpoint its position with absolute precision. Not so. The very act of measurement has introduced a disturbance.

According to quantum mechanics, that electron could now be anywhere in the universe. In its simplest form, the Quantum Multiverse is this idea writ large; a multiverse in which endless “copies” of every single one of us are right now living wildly different and slightly similar lives without ever knowing which of us is better or worse off as a result. Everything that can happen does happen and is happening right at this very moment. Looking back, I think I can say with some accuracy that I was seduced by the multiverse because of what it meant for me in light of my father’s death. For months, I struggled continually with the startling finality of his absence. I would eventually try to forget him because calling upon his memory would become too difficult. Yet forgetting him felt unnaturally cruel, not to mention selfish.

In part, then, *Constellations* is my attempt to dramatize this dilemma: the urge to remember versus the need to forget. But crucially it is also a play in which the science at the heart of quantum mechanics is explored through the many and varied possible lives of a single couple: cosmologist Marianne and artisan beekeeper Roland.

We follow the pair as they fail at first-time small talk, only to then see them succeed. Likewise, we watch as Marianne and Roland break-up and stay together, move in with one another and go their separate ways, embark upon an extramarital odyssey and commit to a life of monogamy. It is a play in which the finitude of their romantic endeavours is both celebrated and mourned.

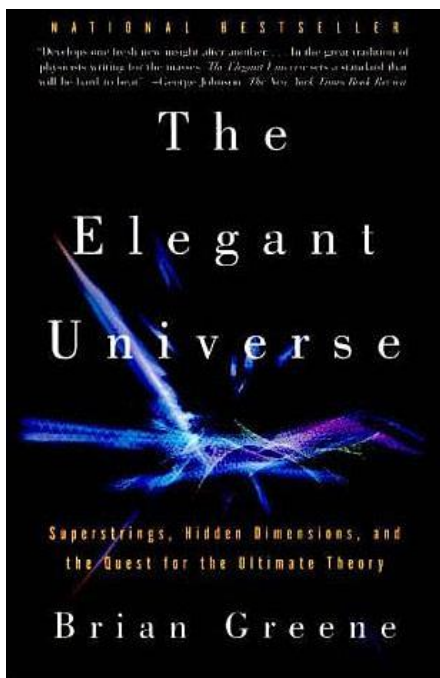
Theoretical physicist Bryce DeWitt once summed up the dangerous duality of the multiverse by saying: “The idea of 10,100+ slightly imperfect copies of oneself all constantly splitting into further copies, which ultimately

become unrecognisable, is not easy to reconcile with common sense. Here is schizophrenia with a vengeance.”

However maudlin it might now sound, the notion that there might be a universe in which my dad was yet to have died was both curiously unhelpful and quietly consoling. Because, of course, there must too be a universe in which he died years ago. A universe in which we have never met. A universe in which he refuses to speak to me. Likewise, out there somewhere, will be a universe in which John Lennon continues to make music and David Cameron never made it beyond the entrance examinations at Eton.

In the Quantum Multiverse, chance is our saving grace and our Achilles' heel; we are both wildly autonomous and utterly powerless.

Payne, Nick. “Nick Payne: from one bereavement to endless universes.” *The Telegraph*, Telegraph Media Group, 9 Nov. 2012, www.telegraph.co.uk/culture/theatre/theatre-features/9666090/Nick-Payne-from-one-bereavement-to-endless-universes.html. Accessed 29 Sept. 2017.



Looking for more on the subject? Check out ***The Elegant Universe: Superstrings, Hidden Dimensions, and the Quest for the Ultimate Theory***. Book by Brian Greene published in 1999, which introduces string and superstring theory, and provides a comprehensive though non-technical assessment of the theory and some of its shortcomings. In 2000, it won the Royal Society Prize for Science Books and was a finalist for the Pulitzer Prize Nonfiction.