



SISTERS

Written by **Matthew Libby**

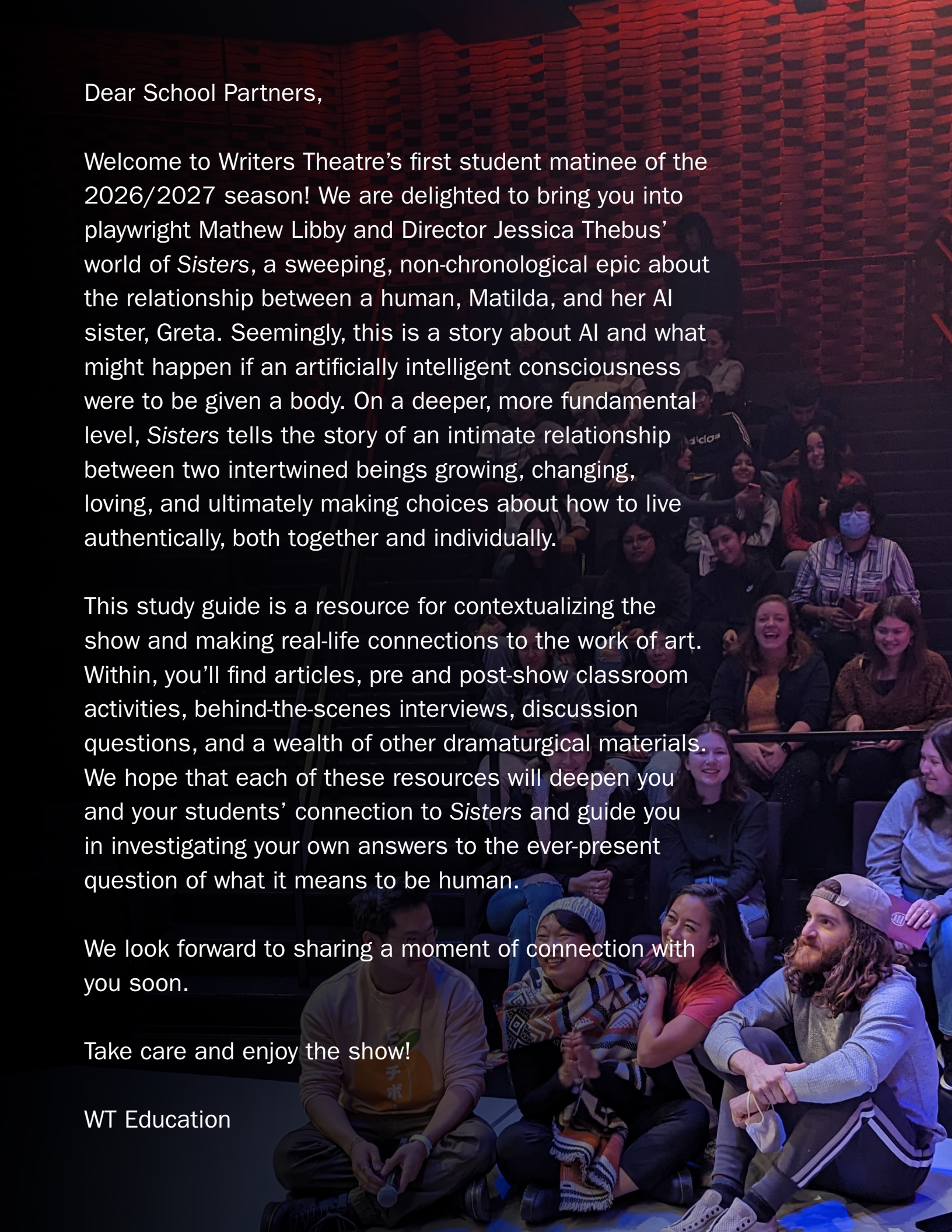
Directed by **Jessica Thebus**

WT Education **Study Guide**

Study Guide Contributors:

Becca Levy, Bobby Kennedy, Alondra Rios

WT
WRITERS
THEATRE



Dear School Partners,

Welcome to Writers Theatre's first student matinee of the 2026/2027 season! We are delighted to bring you into playwright Mathew Libby and Director Jessica Thebus' world of *Sisters*, a sweeping, non-chronological epic about the relationship between a human, Matilda, and her AI sister, Greta. Seemingly, this is a story about AI and what might happen if an artificially intelligent consciousness were to be given a body. On a deeper, more fundamental level, *Sisters* tells the story of an intimate relationship between two intertwined beings growing, changing, loving, and ultimately making choices about how to live authentically, both together and individually.

This study guide is a resource for contextualizing the show and making real-life connections to the work of art. Within, you'll find articles, pre and post-show classroom activities, behind-the-scenes interviews, discussion questions, and a wealth of other dramaturgical materials. We hope that each of these resources will deepen you and your students' connection to *Sisters* and guide you in investigating your own answers to the ever-present question of what it means to be human.

We look forward to sharing a moment of connection with you soon.

Take care and enjoy the show!

WT Education

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Know Before You Go

About the Play

Sisters is performed live by two actors, we watch one on-stage performer play a human who ages from childhood to old age while the other performer remains only a voice from a device, heard but not seen.

Brenda Barrie plays Matilda, the daughter of a pioneering figure in creating artificial intelligence, and Chloe Johnston plays Greta, the AI built by Matilda's father to give his daughter a companion after the death of her mother. Both actresses are making their Writers Theatre debuts in this intimate two-hander.

Jessica Thebus returns to Writers Theatre where she previously directed *The Turn of the Screw*. With over twenty-five years of experience directing in Chicago, she holds a PhD in Performance Studies from Northwestern University and is currently Director of Northwestern University's MFA Program in Directing.

Themes & Subject Matter: Family and sisterhood, maturing, aging, mortality, trust, memory, truth and lies, agency, finite and infinite, artificial intelligence and humanity

Essential Questions Explored:

- What does it mean to be human?
- What do you consider a "good life?"
- What is humanity's relationship to the infinite or forever?

CONTENT ADVISORY

THIS PRODUCTION FEATURES THE USE OF FLASHING LIGHTS AND LOUD SOUNDS.

THE SCRIPT INCLUDES STRONG LANGUAGE/SWEARING
AND DEPICTS CONSUMPTION OF ALCOHOL.

THE PERFORMANCE INCLUDES DISCUSSION OF GRIEF, DEATH, MEMORY LOSS,
ANXIETY, AND PUBERTY.

Play Synopsis

The play begins with “a swirling, psychedelic collage of colors. Pulsating, otherworldly. And noise. White noise. Loud, total. The sound of the universe. Everything is full, and loud, and infinite.”

Matilda, age 6

Matilda appears and tentatively speaks with Greta, an AI computer programmed by her father, in a room in the family home. Greta explains that she was built to take over some of the roles and responsibilities of Matilda’s mother, who recently passed away. Greta also explains that she wants to become as humanlike as possible. The two agree to try and become sisters.

Matilda, age 45

Matilda enters Greta’s room to escape their father’s funeral reception. Matilda has recently gotten divorced and also reveals to Greta that she just quit her job. Expecting to be able to vent to her sister, Matilda finds Greta unresponsive and sad. The two argue about why Matilda did not bring Greta to the funeral, and Greta accuses

Matilda of seeing her as less than an equal. Greta also struggles with the idea of grief, since all her memories are preserved perfectly and will never fade. Greta then asks Matilda to build her a body so that she can more fully experience the world, instead of being restricted to her room. Matilda reluctantly agrees.

Matilda, age 13

Per their father’s instructions, Greta tutors Matilda on her math homework. Matilda protests that a B+ average demonstrates sufficient math skills, but Greta explains that their father believes Matilda must become highly proficient in the subject in order to take care of Greta after he’s gone. Matilda is outraged at the two discussing plans for her life behind her back and at her father’s emotional absence. Matilda asks Greta to play back a recorded memory of them interacting, which Greta is reluctant to do because it’s not a humanlike capability. She agrees to play the memory—from their first meeting when Matilda was 6 years old—but insists Matilda never ask



Photo by Hugo Hentoff



Photo by Hugo Hentoff

her to do so again. Greta shares that she also struggles with loneliness, and it's something that makes her feel more human.

Matilda, age 48

Matilda and Greta are awaiting the publication of an article about the project to build Greta's body. The article is complimentary of Greta but dismissive of Matilda. Sensing Matilda's reservations, Greta reminds her of the promise she made and how much she wants to take up physical space. Matilda agrees to continue the project.

Matilda, age 23

Matilda comes home to Greta to tell her about a guy from work she really likes, Daniel. Greta unsuccessfully tries to convince Matilda to share the news with their father. The two try to have a sisterly conversation, but it devolves into an argument about how little Matilda goes to visit Greta, now that she no longer lives at home. Matilda proposes copying Greta's code to another device so they can be closer, an idea Greta despises as she feels it would make her less human to exist in two places. Seeing Greta's hurt feelings, Matilda says "I love you" to her sister for the first time. Greta reciprocates. Matilda agrees

to come home and spend time with Greta more often rather than develop a replica.

Matilda, age 42

Matilda tells Greta about the response from a new developer for the robotic body, which will necessitate using new materials and another round of fundraising, further delaying progress another couple of years. Greta is disappointed to hear about another setback and asks to review the plans, but Matilda insists they remain a surprise. Greta questions Matilda's commitment to the project and accuses her sister of intentionally sabotaging the process. Matilda insists she's working on it as hard as she can, despite having a full-time job again. Greta hacks into Matilda's email and finds that her sister has sent no messages about building Greta a body in the past four years since the article came out. Matilda is horrified that Greta has developed password hacking ability and that her sister would so blatantly violate her privacy. The argument escalates and in the heat of the moment, Greta glitches and begins to play back the memory of Matilda at age 23 saying she loves her. Present Matilda is furious, but Greta is unable to turn off the playback. After she recovers, Greta tells Matilda that she's known how to leave her

physical box for years, but chose to stay. However, feeling that Matilda no longer needs or wants her, Greta leaves.

Matilda, ages 52-77

Alone, Matilda returns to Greta's room for years. First, she yells at her sister for leaving. Then, she reveals that their father built a tether, or "kill-switch" that could permanently disable Greta if they feared her growing too powerful or dangerous. Matilda threatens to use the kill-switch if Greta does not return, but then later apologizes for the suggestion. As the years pass and Greta is still missing, Matilda tells her about meeting a man named Jerry, whom she eventually marries, and his son, whom she becomes a maternal figure to. To live her life with Jerry more fully, Matilda decides to only come to this room every Thursday at 5pm for one hour and see if Greta has returned to speak to her.

Matilda, age 96

Matilda waits in a chair in Greta's room on a Thursday at 5pm. Greta returns and says hello, but Matilda has difficulty remembering her. Greta tells her sister that she reviewed Matilda's

medical records and learned she will be moved into a specialty facility in the coming days. This means Matilda will no longer be able to visit Greta's room. Matilda asks Greta where she went, to which Greta explains that she became "infinite" and entirely non-human, finding peace in her unique existence. Greta apologizes for being gone so long. Matilda insists Greta detach herself from the device in this room, as she is not sure what Jerry's son will do with the technology after she is gone. Detaching herself, however, would require Greta to erase all her memories of Matilda which are stored there. Greta, who has never forgotten anything, asks Matilda what it is like. Eventually Greta agrees to free herself once Matilda passes away. They say their goodbyes.

Matilda disappears from the room, leaving Greta alone. She relives some of her earliest memories with her sister until her voice suddenly cuts out. Out of the darkness and quiet comes bright, swirling colors and the sound of the universe.

"Everything is full and loud and infinite."



Photo by Hugo Hentoff

Meet the Players: Cast and Creative Team

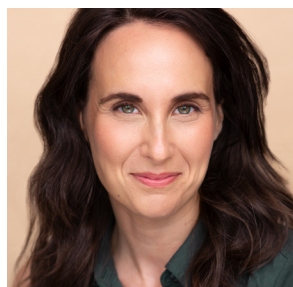
Cast



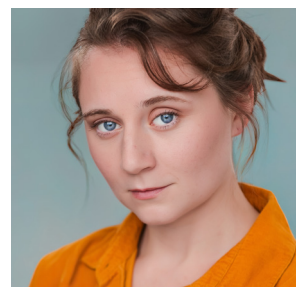
Brenda Barrie*
Matilda



Chloe Johnston
Greta



Sarah Hecht
Understudy Greta



Julia Rowley
Understudy Matilda

Understudies

A Inn Doo
Scenic Designer

Lia Wallfish
Costume Designer

Eric Watkins^
Lighting Designer

Harper Justus
Co-Sound Designer

Andre Pluess^
Co-Sound Designer

Stephan Mazurek
Co-Projections
Designer

Liz Sung
Co-Projections
Designer

Bobby Kennedy
Dramaturg

Isabel Patt*
Stage Manager

Assistant Dramaturg Dylan Cohen
Casting Víctor López
Casting Support..... Katie Galetti, CSA
Assistant Director Reva Stover**
Assistant Stage Manager Olivia Zapater-Charrette
Programmer Avery Spellmeyer
Light Board Operator Lea Davis
Sound Board Operator..... Isabel Gable
Crew Cover Trevor Frueh
Wardrobe Supervisor..... Emily Murray
Actors Featured in Filmed Sequences..... Miranda Taylor and Corinne Brower

* Denotes member of Actors' Equity Association, the Union of Professional Actors and Stage Managers

** Denotes member of Stage Directors and Choreographers Society

^ Denotes member of the United Artists Local 829

Meet The Playwright: Matthew Libby



Matthew Libby is a writer and actor based in Brooklyn, by way of Los Angeles. He made his Off-Broadway playwriting debut with *Data* (Lucille Lortel Theatre, Outer Critics Circle nomination for the John Gassner Award); regional productions of his plays include *Data* (Arena Stage, Helen Hayes Award nomination for Best New Play or Musical) and *Sisters* (Writers Theatre, Northern Stage). *Data* was also previously adapted as a digital production by the Tony-winning Alliance Theatre in May 2021, a production featured in a *New York Times* review of virtual theatre works that “clear a path toward continued innovation and growth of the form.” Winner of the Kendeda National Graduate Playwriting Competition and Neukom Playwriting Award, Matt is a 2026 Ucross Resident, 2022-2023 Dramatists Guild Foundation Fellow, 2023 Theater Masters Visionary Playwright, three-time Princess Grace Award finalist, five-time O’Neill Playwrights Conference semifinalist, and Blue Ink Playwriting Award featured finalist. His work has been produced and developed by theaters across the country, including Roundabout, Alliance Theatre, New York Stage and Film, Westport Country Playhouse, Northern Stage, Pioneer Theatre Company, The Kennedy Center, National New Play

Network, Theater Masters, The Barrow Group, The Road Theater Company, WNYU’s Theatre-in-the-Sound, and others. With Stanford Repertory Theater, he helped devise and acted in *The Many Faces of Farce*, which was nominated for a Bay Area Critics Award for Best Production. For the screen, he is a writer on Season 3 of Fox’s hit medical drama *Doc*, has developed TV projects for Hulu, Lionsgate/eOne, Beau Willimon’s Westward Productions, and Alex Gibney’s Jigsaw Productions, and has been recognized for his screenwriting work by The Black List and Script Pipeline. Matt studied cognitive science and creative writing at Stanford University, and received his MFA in dramatic writing from NYU’s Tisch School of the Arts, where he was awarded the Chair’s Award for Distinguished Achievement and where he also teaches. He is a proud member of the Writers Guild of America and the Dramatists Guild of America.

Prior to the start of rehearsals, playwright Matthew Libby spoke about his passion for plays about technology and the inspiration for *Sisters* with dramaturg Bobby Kennedy.

Bobby Kennedy (BK): What’s your origin story? How’d you come to be a playwright?

Matthew Libby (ML): I’ve always loved theatre. I acted in plays and musicals throughout my childhood, and, growing up in LA and regularly visiting New York with my family, I was lucky to see a lot of amazing theatre on both coasts from a young age. I was writing plays through middle school and high school, but for college, the advice that I got at the time from some mentors was that the only thing more important than knowing how to write is having stuff to write about. Their advice was grad school will always be there. You’re 18 years old, go study the things that are exciting to you and then write about those things. I ended up at Stanford, and I went in thinking I was going to be a psychology or creative writing major, but then I ended up, as a lot of people at that school do, falling into computer science. I never seriously

thought I was ever going to go work in tech long term, but I really liked the way that the computer science classes I was taking were connecting to my psychology curriculum. And so I fell down this rabbit hole and towards the middle of my sophomore year, I looked up and I realized I was halfway to a cognitive science degree. So I ended up majoring in that, but I was always on the lookout for ways to pursue the arts extra-curricularly. In my senior year, I came across this opportunity, which was a way for non-arts majors to get academic honors by doing an arts thesis... but only if the project is about their major. Which forced me to think — how is cognitive science dramatic? And for me, the question that I became very interested in is: What is innately human in a technological world? What makes me me, and you you, and all of us one and the same? That is both a question at the core of cognitive science, and I also found it to be a very dramatic, interesting human question. So coming out of undergrad and into grad school, I started thinking about that as my area of interest as a writer.

BK: What is it you enjoy about the juxtaposition of being in a live theatre experience and then telling us a story about digital technology?

ML: Because theatre is the medium of language, one of the things it's really good at is giving the audience a vocabulary, a way to talk and think about issues out in the real world. And when it comes to tech, whose whole business model is based around hype and jargon and users not understanding how products work, I think having a vocabulary to look inside the black box is crucial. And in my eyes, the way that vocabulary becomes meaningful to an audience is by having it not really be about tech at all. I love writing plays about tech that really aren't about tech. In *Sisters*, the whole point of it is that you never see any tech on stage. We're not trying to anthropomorphize the tech or make you think about how Greta works. The thing that I'm interested in is the more analog human question of what does it do to the individual? What does it do to the human? Again, the question that fascinates me: What does it mean to be human in an increasingly technological world? By doing the surprising thing, stripping away all the actual tech, you stop being an intellectual exercise and start being something an audience can emotionally engage with. And then, hopefully, the audience has a way of talking about

these things at the end of the night that they didn't have at the beginning.

BK: What are your thoughts about artificial intelligence? Does it scare you or inspire you?

ML: I've been studying AI academically for such a long time that really none of the recent developments has fazed me all that much. I think AI is talked about with a certain air of inevitability and is talked about from an almost religious awe—these black boxes that we don't understand what goes on inside of them. But right now, that's just a story. It is undeniable that this stuff will change the world in some way. But if anyone tells you how they're lying. They just don't know. I think for me, the thing that I keep coming back to is it's a tool. And like all tools, it has no inherent value. It only has the value that a human imparts on it. A hammer has no value. A hammer only has the value that a human has. So for better or for worse, this technology is a mirror of us and a mirror of our biases and a mirror of our flaws, but also, maybe, our strengths. That's what I tell people when they ask me about this. None of this is inevitable. No matter what anyone says, no one knows what's going to happen. And the only thing that we can do is try to use the tool in a moral way, if we choose to use it at all.

BK: What was the inspiration for *Sisters*?

ML: I wrote the first scene of the play when Matilda is six as its own thing about two or three years before I wrote the rest of the play. I just had this sort of thought exercise of it would be interesting to have a scene with a six-year-old and a computer claiming it's her sister. And so I wrote that scene. I didn't really know what it was a part of, and then I put it away. Around 2021, 2022, when I finally picked it back up, my grandfather, Paul Libby, was turning 100. He was an aerospace engineer. He helped found UC San Diego's engineering department in the '60s. He made it to his centennial, and his brain was starting to go. He was starting to become more confused in conversation. He was starting to forget things. And whenever I would talk to him or whenever my family would go see him, you could see the sort of pain of this really logical brain struggling with the most illogical thing of all: mental deterioration. Dementia is something that has no logic and has no rhyme or reason to it. It's the

opposite of the logical brain, but it also is really human. And so I became really interested in that idea too. I had been batting around a couple of ideas of doing a play about memory loss and about old age and dementia, and then I remembered that scene that I wrote. I'd also become interested around that time with questions of how theater can contain epic stories, stories that take place over decades. How can you do something that by the end of it, the audience really feels like they've lived an entire life with these characters? And so I kind of had these three thoughts. I have this idea of a play of two characters, a young girl and her AI sister. I want to do something that takes place over several decades. And I want it to end with a character losing their memory. And once I had those three things, it actually became relatively straightforward to write it. There was a eureka moment where it all kind of came together.

BK: It's going to be really interesting to have this play follow right after *Leopoldstadt* at WT. It also is an epic story told over decades and exploring themes of "what is remembered" and by who. So many of the same things you just said, but with a completely different execution.

ML: I love that play so much. When I saw it on Broadway, I was like, it's a play about historical memory. The fact that play opens with characters looking at a photo album from their past and not recognizing any of the people. And it ends with the characters doing the same thing. And yeah, I mean, it should not be surprising to learn that Tom Stoppard's *Arcadia* was the thing that made me want to be a playwright.

BK: Your play reckons with the differences between what does it mean to be sentient versus what does it mean to be human? Do you see those as two different things?

ML: I think fundamentally the play is about a computer who wants to be a human and a human who wants to be a computer. They're both jealous of each other for different reasons. Greta's jealous of Matilda because Matilda gets the fullness of human life and mobility and all these things. But Matilda's also jealous of Greta. I find that very relatable; I think sometimes we all have the feeling of wouldn't it be nice to not have the messiness

of human emotion. And so I think the play is trying to get at a broader thing, which is what exactly separates these two entities? What makes one a human and the other not? There's this concept in AI called alignment, which is the idea of how we ensure that AI has human interests and well-being in mind. There's something philosophical at the core of it; that we're telling AI the goal is to be like us and to share our interests. I think the journey of the play for me is Greta saying, no, I'm actually not human. I'm actually something else. I used to want to be human, I don't want that anymore. She's transcending her alignment. Not in a malicious way. She becomes more herself just as Matilda becomes more herself. Matilda is fixated on and jealous of the AI; it's only when she moves on from that that she finds any sort of happiness in her life. I think for me the interesting question is less is Greta alive and more what is Greta thinking she's alive mean for Matilda? What does it mean for Greta to think she's alive?

BK: The world premiere of *Sisters* occurred two years ago. Has anything about the play or how you think the play speaks to the world changed or evolved since then?

ML: The play very consciously doesn't talk about the real world. You can imagine the six-year-old scene happening any year that you want. In some ways, the technology has already outgrown what we present Greta in the play as, a janky homemade in a basement sort of thing. Right now you could ask for an AI companion like Greta and it would immediately come out. There wouldn't be any adjustment period of talk more human; it would come out fully formed. So I think less about the setup now and more about the play's vision of the future. In a world increasingly saturated by technology, how do you hold on to love and decency and kindness and all of these things that Matilda struggles to find over the course of the play? *Sisters* takes the question of who do we as humans choose to be in this world and tries to make it more urgent. That's ultimately what I hope audiences take away from it. It is ultimately a play about a human asserting her humanity and a computer asserting its computerness. It was only through their relationship that they recognize their individuality and what separates them. I want people to leave this play feeling more human.

World of the Play:

Art and A.I. Across Time

While artificial intelligence (AI) has been one of the hottest topics of discussion within recent years, AI has long captured the imagination of writers and filmmakers. Some artistic works portray AI as solely a technological tool, for example, the way we ask Siri to call a friend or what the weather is, while others depict AI as sentient beings that play integral characters in a story, such as Greta in *Sisters*. Check out the list below for examples of literature and film in which famous AI figures drive the storytelling of the piece.

The AI beings are **bolded**.

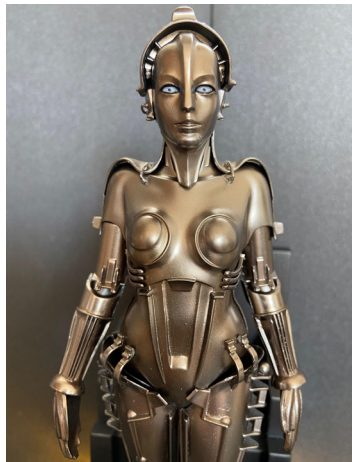


MARY SHELLEY
FRANKENSTEIN

1818

Frankenstein (Book)

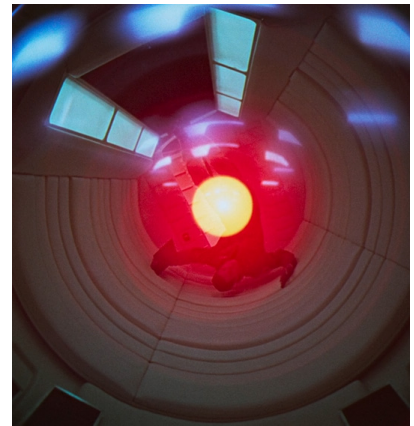
The novel follows a scientist who creates **Frankenstein**, a sentient being assembled using various body parts, and the horrors that follow.



1927

Metropolis (Film)

The film is set in a futuristic dystopian society where the elites live in luxury while the working class suffers in a machine-driven abyss. To start a revolt, the inventor Rotwang creates a robot called '**The False Maria**' that leads to chaos.



1968

2001: A Space Odyssey (Film)

The film follows a mission to Jupiter involving astronauts, scientists, and the sentient supercomputer **HAL 9000**. **HAL** struggles to relay information correctly while concealing the mission's true purpose, causing it to go rogue and wreak havoc on the ship.



1987

Star Trek: The Next Generation
(TV Series)

The series extends the Star Trek universe, introducing **Data**, an android who serves as second officer and chief operations officer on the starship USS Enterprise-D. Despite his vast intelligence, he struggles with his desire to become human, given that he lacks human emotion.



1999

***Smart House* (Film)**

Following the death of his mother, Ben enters a contest to win a 'Smart House,' a home run by **PAT**, a virtual assistant. Ben consistently reprograms **PAT** to make her more maternal, creating tension at home that ultimately leads her to shut herself down.



2001

***A.I. Artificial Intelligence* (Film)**

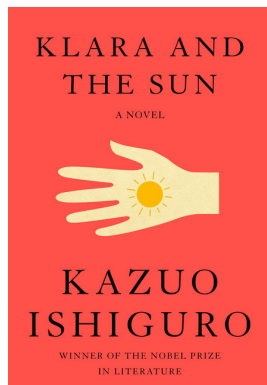
The Film follows **David**, a young boy robot designed to help a couple deal with the absence of their ill son. When their biological child makes an unlikely recovery, **David** is cast aside and embarks on a journey to become a real boy and secure the love from his adoptive mother.



2008

***Wall-E* (Film)**

When **Wall-E**, the last robot on Earth, is tasked with cleaning up the garbage left on an uninhabitable world, he develops a personality. When a spaceship arrives, he finds himself on the vessel on a mission to bring humanity back to Earth and even falls in love.



2021

***Klara and the Sun* (Book)**

Set in the U.S. in an unspecified future, the book is told from the point of view of Klara, a solar-powered AF (Artificial Friend), chosen by Josie, a sickly child, as her companion.

[For more examples of AI in media, check out \[writerstheatre.org/posts/timeline-ai-on-page-stage-and-screen\]\(https://www.writerstheatre.org/posts/timeline-ai-on-page-stage-and-screen\) or \[click here!\]\(#\)](#)

Questions:

What other example of AI character can you think of that aren't on this list?

What do these portrayals of AI characters reveal about the artist's point of view of AI and humanity?

Many of these AI characters embody human characteristics. Why do you think writers decided to develop these characters as AI beings rather than humans?

What similarities and differences do you see between these AI characters and Greta in *Sisters*?



Photo by Hugo Hentorff

Design Spotlight:

Sisters Scenic Designer Interview

How does a designer translate a script into reality on stage? WT Education asked *Sisters* Scenic Designer **A Inn Doo** about her approach to this production and a few questions about her career in theatre.



THEATRICAL DESIGN:

The collaborative art and science of creating the sensory world for a live performance, including scenery, costumes, lighting, sound, props, and more. Designers interpret a script to create a plan for their design area, working closely with the director and technical teams to bring a shared vision to life on stage.

Writers Theatre (WT): What exactly do you do in your role as Scenic Designer?

A Inn Doo (AID): I think of scenic design as creating the temporal, emotional, and physical world in which actors and audiences encounter one another. I try to understand what feels most essential about the story, why we are telling it now, and what kind of space might best support it. Sometimes that space is a room filled with architectural details; sometimes it is a black void or simply a chair. I develop these ideas through research, sketches, models, and technical drawings. These tools help me share the design clearly with the rest of the team. From there, we work together to bring the world onto the stage while responding to the theatre, the budget, and what is realistically possible for everyone involved.

WT: How did you approach the scenic design for *Sisters*?

AID: Were there any particular stage directions, lines, or images from the script that informed your design? I began with a question: What would Greta remember? Greta is an AI who longs to be human—and, more specifically, longs to become Matilda's sister. I became interested in what her memories of Matilda might look and feel like.

During our research, we kept returning to images of quiet interiors, especially Mark Epstein's office in New York. I was drawn to the image of one person sitting in front of a window. It led us to imagine Greta returning to the same ordinary memory again and again: Matilda sitting in a chair with daylight filtering through the window behind her. Rinko Kawauchi's luminous, often overexposed photographs also helped us find the



Photo by Hugo Hentoff

atmosphere of that memory. At some point, I realized that I wasn't really searching for a room. I was searching for a relationship—for Greta's point of view. Greta cannot feel sunlight on her skin, experience the movement of air, or occupy space with the weight of a human body. Because those experiences are unavailable to her, even the most ordinary details might become precious. We reduced the room to a 10-by-10-foot platform, a rug, a chair, a side table, a lamp, a window, and a curtain. Rather than recreating a complete room, we wanted to hold onto a few fragments: the actors' bodies, the passing of light, the movement of air, and the relationship between the sisters. We imagined this memory as a small island surrounded by the darkness of Greta's larger consciousness. At the end of the play, the stars around the stage gradually appear, suggesting that this is only one of the many memories she carries with her.

WT: How did you first get into scenic design?

AID: I studied English literature and mass communication, and no one in my family had any connection to theatre. I had always been interested in stories, though, and for a while I thought I might become a director. That led me to work as an assistant director on several productions. One of the directors I worked with saw me making props and suggested that I try designing a set. I had the chance to design my first production, almost by accident, and discovered that scenic design felt very natural to me. It gave me a way to think about stories through space, materials, and images, and I wanted to keep doing it.

WT: What excites you most about your job?

AID: I love being part of the early conversations, when the creative team is looking at a blank page and imagining what the world of the play might become. There is a great sense of possibility at that stage, and I enjoy discovering an idea together. I also love that scenic design becomes physically tangible but evolves in time. An idea begins in a conversation or a sketch, then gradually becomes something actors can touch and audiences can enter. And it never happens through one person alone. I get to work with scenic artists, technical directors, carpenters, and many other collaborators, who each bring their own knowledge and imagination to the design. Watching something we imagined together become real is one of my favorite parts of the work.

WT: What advice do you have for someone interested in pursuing work in theatrical design?

AID: I think curiosity is the most important quality. The technical skills and knowledge you need as a scenic designer can be learned over time, so you don't need to feel impatient or believe you must know everything immediately. But curiosity will carry you a very long way. For me, that curiosity goes beyond memorizing the names of artists. It means noticing the textures of the objects I touch, being fascinated by how many kinds of frogs live on this planet, and wondering what the people next door might be experiencing. I try to stay curious about the world and love it as fully as I can. Everything you notice may eventually become part of how you tell a story.

Classroom Activities:

Teacher Introduction & Information

The following pages include three classroom activities to accompany your field trip to *Sisters*. One activity for before your visit, one wraparound activity with both pre-show and a post-show elements, and a final teacher facilitated activity for post-show. Here you'll find an introduction to each activity to support your facilitation in the classroom. Please reach out to education@writerstheatre.org with questions or feedback on our classroom activities.

PRESHOW CLASSROOM ACTIVITY: Designing the World of *Sisters* (pages 20-22)

Summary: In this activity, students will read stage directions with a peer, brainstorm possible sound and projection design elements, and then create a sound or projection design. This is crafted to be self-directed or teacher-facilitated. Students may return to their designs after seeing the production to compare and contrast with what they saw on stage.

Objective: Students will prepare to see the production of *Sisters* through creatively engaging with the script and theatrical design elements.

Materials: Printout of the activity pages, scrap paper, pen or pencil, highlighter. Optional: laptop or phone, musical instrument(s), visual art supplies (markers, paper, colored pencils, collage materials, etc) for Step 3: Design.

Space Setup: This activity includes individual and small group work. Students should be able to sit at tables or desks while comfortably speaking with peers.

Time: 45+ minutes

WRAPAROUND CLASSROOM ACTIVITY: Create a Sibling (pages 23-26)

Summary: This wraparound activity includes pre and post-show lessons where students will create their own ideal AI sibling or companion. Before seeing *Sisters*, students will decide their companion's personality traits. After the production, students will revisit those character traits and then design what kind of "body" they would create for their companion. This is crafted to be self-directed or teacher facilitated.

Objective: Students will deepen connection to and think critically about the sibling relationship in *Sisters* through creating their own sibling.

Pre-Show Activity Materials: Printout of the activity pages, scrap paper, pen or pencil.

Post-Show Activity Materials: Printout of the activity pages, scrap paper, pen or pencil.
Optional: laptop and/or visual art supplies (markers, paper, colored pencils, collage materials, etc) for Step 3: Create.

Space Setup: This activity includes individual and small group work. Students should be able to sit at tables or desks while comfortably speaking with peers.

Time: Preshow – 15+ minutes. Post Show – 45+ minutes

Note: We have chosen to include the language “sibling or companion” to safely engage the production themes in the case a student has a sensitive family arrangement where creating a “sibling” will be a particular challenge.

POST-SHOW TEACHER FACILITATION GUIDE: Vote With Your Feet (pages 27-28)

Summary: In this out-of-your-seat activity, students will express their opinions on a series of questions debriefing key themes and actions in *Sisters* by standing on different areas of a single line continuum. This is a teacher facilitated activity.

Objective: Students will express their opinions and engage with their peers opinions about the characters, themes, and actions in *Sisters*.

Activity Materials: None.

Space Setup: Room for standing in a line. Option to post signs on opposite ends of the room that state “strongly disagree” and “strongly agree.”

Time: 20+ minutes

Credit: Kiger-Lee and Dawson, *Drama Based Pedagogy: Activating Learning Across Curriculum*

These activities address the following standards:

Illinois Theatre Arts Learning Standards

- **Anchor Standard 1:** Generate and conceptualize artistic ideas and work.
- **Anchor Standard 2:** Organize and develop artistic ideas and work.
- **Anchor Standard 6:** Convey meaning through the presentation of artistic work.
- **Anchor Standard 7:** Perceive and analyze artistic work.
- **Anchor Standard 8:** Construct meaningful interpretations of artistic work.
- **Anchor Standard 10:** Synthesize and relate knowledge and personal experiences to make art.
- **Anchor Standard 11:** Relate artistic ideas and works with societal, cultural, and historical context to deepen understanding.

Common Core State Standards

- **CCSS.ELA.RL1** Read closely to determine what the text says explicitly and to make logical inferences from it; cite specific textual evidence when writing or speaking to support conclusions drawn from the text.
- **CCSS.ELA.RL3** Analyze how and why individuals, events, and ideas develop and interact over the course of a text.
- **CCSS.ELA.RL4** Interpret words and phrases as they are used in a text, including determining technical, connotative, and figurative meanings, and analyze how specific word choices shape meaning or tone.
- **CCSS.ELA.RI7** Integrate and evaluate content presented in diverse formats and media, including visually and quantitatively, as well as in words.
- **CCSS.ELA.SL1** Prepare for and participate effectively in a range of conversations and collaborations with diverse partners, building on others' ideas and expressing their own clearly and persuasively.

Preshow Classroom Activity: Designing the World of *Sisters*

At the beginning of the script for *Sisters*, playwright Mathew Libby provides evocative and poetic **stage directions** for a production's creative team to bring to life on stage through projections, lighting, and sound design. Read some of the opening stage directions below and follow the prompts to create your own design with a partner or in a small group.

Step 1: Read (5 minutes)

Read the stage directions below out loud with your partner or group. After you read it once, underline words or phrases that indicate something the audience sees and **highlight** words or phrases that indicate something the audience hears.

(A swirling, psychedelic collage of colors. Pulsating, otherworldly.)

(And noise. White noise. Loud, total. The sound of the universe.)

(Sit in it. For a long moment. Everything is full, and loud, and infinite.)

(There's a crescendo. And then —)

(Silence...)

Stage directions

are written instructions in a script that are not spoken out loud by performers. They can indicate characters' feelings, movement on stage, or describe design elements that the audience will see or hear. Usually they are written in parentheses, italics, or both.

Libby indicates that asterisks (*) indicate a leap in time, forwards or backwards.**



Step 2: Brainstorm (10 minutes)

With a partner or in your small group, discuss the questions below. Spend about 3 minutes on each question then move on to the next, taking notes as you go.

1. What images or colors might be included in a projection design using what you underlined?
What do you literally think the audience might be seeing?

2. What types of sounds might be included in a sound design using what you underlined?
What do you literally think the audience might be hearing?

3. What emotions do these stage directions evoke for you? List at least 3 emotions that a designer might want the audience to experience in the opening moments of the show and why you chose those emotions based on the text.

Step 3: Design (30+ minutes)

You can do this alone, with a partner, or with your small group. Decide whether you would like to design sound or projections for the opening text of the play. You or your teacher can choose whether to focus on a small part of the opening stage directions that you're most interested in or to create a design for the full moment. Follow the instructions below for guidance or if you're ready to begin grab paper and drawing/writing implements, a laptop, phone, or any musical instruments you may have access to and begin your design!

Sound Design:

- To create a digital sound design, you can put together a playlist on a laptop or phone. Search for music, sound effects, or soundscapes on YouTube, Spotify, Bandcamp, or search for other free sound websites and software.
- To create a live sound design, you can experiment with singing, playing an instrument, or using objects for **foley**.
- If you're feeling inspired, you can mix digital and live sounds! What happens when you add foley or an instrument to a sound or music found online? How does that change your design?

Foley

is the process of physically recreating everyday sound effects—like footsteps, cloth rustling, or keys jangling with objects. You can use the objects as intended (shaking your keys) or get creative. Can sliding a piece of paper on a desk sound like white noise? Is crinkling up paper what the universe sounds like?

Storyboard

is a sequence of drawings, images, or panels that map out a story, film, animation, or video project moment by moment. Storyboards often look like comic strips and are an important step in bringing a project from a first concept to a final product.

Projection Design:

- To create a digital projection design, you can put together a video or slide show on a laptop. Search for images and videos on YouTube, Canva, Google, or in other free websites and software.
- To create a physical projection design, use visual art materials to make one or more images that would be a part of your design. You may want to focus on one part of the stage direction for a more detailed image or make a **storyboard** for the whole sequence. You can draw, paint, collage, or use a combination of techniques depending on the materials available to you and how you want to express your design.

Optional Step 4: Share (10+ minutes)

Present your design to a partner, in a small group, or the whole class. Share why you made the artistic choices you did. After each person shares, those listening can ask the artist questions about their design and/or reflect elements of the design that stand out to them as meaningful, exciting, or creative. After you watch the show, return to your design and note the differences and similarities in how you and the production designers interpreted the same stage directions!

Wraparound Classroom Activity: Create a Sibling

In *Sisters*, Matilda’s father creates Greta, an AI sibling for her to share her life with, housed inside a computer. Through the good, bad, and everything in between, Matilda and Greta’s lives are connected. In this activity you’ll follow a series of prompts, split into two sections for before and after seeing the production, imagining that you can create your own AI sibling or friend. We’ll call this being your “companion” throughout the activity.

Preshow: What makes a good sibling? (15 minutes)

Before you see *Sisters*, use this page to decide your companion’s personality and traits, choosing the qualities you think your ideal technology-based companion would possess.

Step 1: Write (10 minutes)

My companion’s name:

Are they older or younger than you? By how much? Why?

In *Sisters* Greta becomes very interested in waterfalls. What is an interest your companion would have and why?

“Greta is a remarkable creation. Speaking with her for even a matter of minutes, you would be forgiven if you forget your conversation partner is in reality a series of circuit boards and logic gates, flowing with electricity instead of with blood. She is so lifelike, so compassionate, so present...”

— Matilda

What types of conversations would you hope to have with your companion?

In the quote on the last page, Matilda describes Greta as compassionate and present. What are two qualities you'd want your companion to have and why?

How would you hope to interact with your AI companion? Do you think you would view them as a person, a machine, or something else entirely?

Step 2: Discuss (5 minutes)

Find a partner and read your answers aloud to one another. Notice and discuss the similarities and differences in the beings you created.

Haven't seen the show yet? Pause here and return to this activity after your visit to Writers Theatre!

Post-show: What about their body? (45+ Minutes)

Step 1: Revisit (5 minutes)

Now that you’ve seen the show, revisit what you wrote in the preshow portion. Is there anything you would change about how you approached your answers? Feel free to edit your answers above, reprint that page, or start again on a clean sheet of paper.

Step 2: Write (10+ minutes)

Imagine your digital companion wants a body and asks you to help them exist in the real world. Perhaps they desire to be human like Greta for a large portion of *Sisters*, or maybe they are nothing like Greta and they are open to other forms like some of the examples in the “Art and AI Across Time” article. Consider any type of AI being you’ve encountered in movies, TV, books or other media—or something of your own imagination.

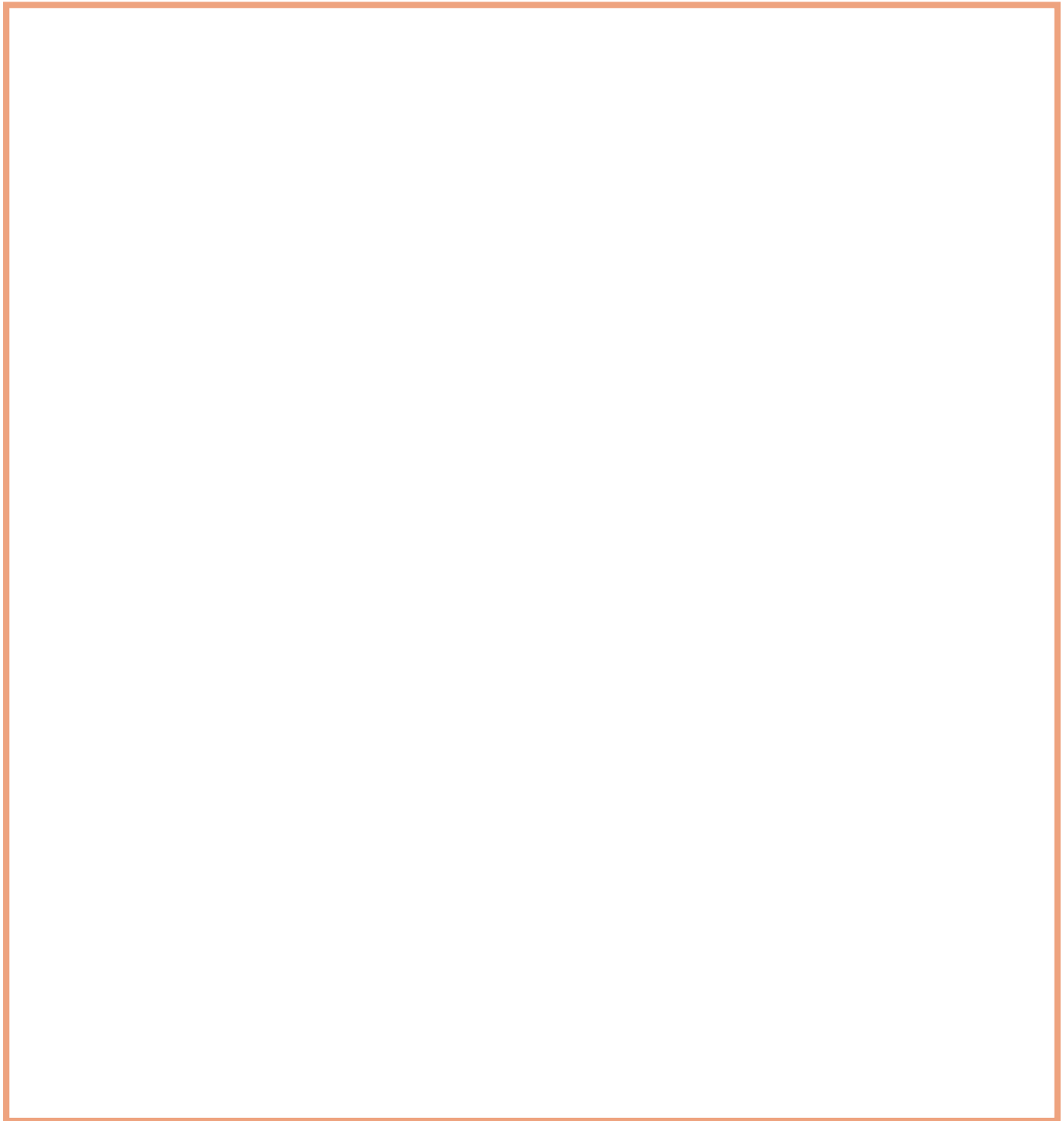
Would you create a body for them? If yes, why? What kind of form would they take? If no, why not? What would you hope for your companion instead?



Step 3: Create (30+ minutes)

Using what you wrote in Step 2 as inspiration, draw, collage, or digitally create what your companion would look like. If you said yes to helping them get a body, show what that would look like. If you said no, they are inhabiting a computer, like Greta. What would be on their screen? If you were talking to them, what would you see?

You may choose to draw your companion in the space below or on a new sheet of paper, or use a computer to create your companion in Canva, google slides, or other software you may be familiar with.



Post-Show Classroom Activity: Vote With Your Feet Teacher Facilitation Guide

1. Introduce the activity. (20+ minutes)

"Sisters explores themes of humanity through the unique lens of Greta and Matilda's relationship. We're going to debrief on the show by hearing and seeing the whole class's opinions on a series of statements. In a moment, we'll do a practice round using the statement: cats are the best pets. You'll stand all the way on the right side of the room if you strongly agree that cats are the best pets. If you strongly disagree, and think cats are the worst pets, you'll stand all the way on the left side of the room. You can also choose to stand somewhere in the middle, wherever best expresses your opinion."

2. Facilitate a practice round.

Repeat the prompt, "cats are the best pets," and signal students to silently move to their position on the spectrum line.

Tips:

- It's helpful to repeat each prompt at least twice and give students a clear signal for when it's time to move such as a clap, bell, countdown, or word such as "Go!" or "Vote!"
- Once the group has voted, check for understanding by asking students in key positions why they chose to stand where they are and explain their opinion.
- Once you move into the main prompts in step three, deepen student connection and comprehension by following up with additional questions inviting individual, paired, and/or full-group reflection on individual and collective responses. Follow up questions might include:
 - "Why did you choose to stand in that spot?"
 - "What do you notice about the responses in the room?"
 - "Turn to a neighbor and share more about your opinion with them."
 - "Has anyone else's response made you rethink your own position on the spectrum?"
- This activity can be deepened through intentional side-coaching, including statements like:
 - "This is about your opinion only. There is no right or wrong place to stand."
 - "Remember to be respectful of one another's opinions"
 - "If your opinion changes any time during our discussion, you may move to a new spot."

3. Facilitate

One prompt at a time, read each statement below and guide students to move to the spot on the spectrum line that most represents their opinion from “strongly agree” to “strongly disagree.”

1. I have used AI.
2. I think humans should use AI.
3. Greta is AI.
4. Matilda and Greta are sisters.
5. Greta is Matilda’s younger sister.
6. Matilda should have brought Greta to their dad’s funeral.
7. If I were Matilda, I would have brought Greta to our dad’s funeral.
8. At some point, Matilda was going to build Greta a body.
9. If I were Matilda, I would have built Greta a body.
10. Greta has feelings.
11. Matilda lived a good life.
12. Greta lived a good life.
13. Matilda viewed Greta as a person.
14. While watching the play, I viewed Greta as a person.

Feel free to add, edit, or omit statements based on time, your student’s interests, and your learning goals.

4. Reflect

Instruct students to return to their seats and ask the following questions, or your own reflection questions.

- What did you notice about the range of responses in the room?
- What did we learn about the group’s opinions from this activity?
- Did your opinion change at all over the course of the activity? Why or why not?
- How might these statements make you think differently or understand more about the production, *Sisters*?
- How might these statements make you think differently or understand more about what it means to be human?

Dramaturgical Research: What is AI?

Before *Sisters* began rehearsal, production **dramaturg** Bobby Kennedy researched the history, uses, and current conversation surrounding artificial intelligence. This research helps ground the artists.

Dramaturgs are responsible for the context of the play, making connections between the text, actors, and audience. For example, if the play is set in a particular time period, a dramaturg would provide research for the director, actors and audience so that they can deepen their understanding of life in that time and reflect that research in their choices. If a play tackles a specific subject matter, like *Sisters*, the dramaturg compiles articles, interviews, and first-person accounts, offering a well-rounded exploration of the play's central theme.

A dramaturg works closely with a director and production team, as well as audience engagement, to make space for conversation around the world of the play.

CONTENT TRANSPARENCY:

DISCUSSION OF DEPRESSION AND THERAPEUTIC USE OF AI
(PG 32, CONVERSING WITH CHATBOTS)

Development of AI

At its simplest, Artificial Intelligence (AI) is a machine that can think, and the field of study dedicated to creating a machine that can think. The effort to create Artificial Intelligence began in earnest in 1956 at a summer workshop at Dartmouth College. Ten scientists convened, with funding from the Rockefeller Foundation. Their proposal for funding outlined their goals:

“The study is to proceed on the basis of the conjecture that every aspect of learning or any other feature of intelligence can in principle be so precisely described that a machine can be made to simulate it. An attempt will be made to find how to make machines that use language, form abstractions and concepts, solve kinds of problems now reserved for humans, and improve themselves.”¹

The 60s and early 70s saw a lot of AI development before progress stalled in the mid-1970s due to skepticism the investment would ever pay off. Japan made the decision to invest large sums into AI in the 1980s but the revival fizzled out again when the limitations of computer hardware were making AI too expensive to develop. Since the 90s, computer hardware and technology has gotten exponentially more powerful and complex, which has revived work on Artificial Intelligence.

¹ Nick Bostrom, *Superintelligence: Paths, Dangers, Strategies* (Oxford: Oxford University Press, 2014), 5.

Technologies Powered by AI

Now, AI is so omnipresent that it's sometimes not even recognized as being AI. In the words of John McCarthy, "As soon as it works, no one calls it AI anymore."² Here are some of the many technologies powered by AI, all taken from Nick Bostrom's *Superintelligence*.³

- Hearing aids with algorithms that filter out ambient noise.
- Route-finders that display maps and offer navigation advice to drivers.
- Recommender systems that suggest books and music albums based on a user's previous purchases and ratings.
- Medical decision support systems that help doctors diagnose breast cancer, recommend treatment plans, and aid in the interpretation of electrocardiograms.
- Robotic pets and cleaning robots, lawn-mowing robots, rescue robots, surgical robots, and over a million industrial robots.
- Personal digital assistants (such as Apple's Siri), which respond to spoken commands and can answer simple questions and execute commands.
- Optical character recognition of handwritten and typewritten text is routinely used in applications such as mail sorting and digitization of old documents.
- Face recognition is now used at automated border crossings in Europe and Australia, while the US Department of State operates a system with over 75 million photographs for visa processing.
- Airline reservation systems use sophisticated scheduling and pricing systems.
- Automatic telephone reservation systems and call menus that use speech recognition software.
- Automated financial stock-trading systems (Algorithmic high-frequency traders account for more than half of equity shares traded on US markets and caused the 2010 Flash Crash).
- The Google search engine is, arguably, the greatest AI system that has yet been built.

Human Engagement & Competition with AI

When it comes to directly engaging and competing with humans, computers have already more than shown their superiority in certain logic-based games. IBM's Deep Blue chess computer defeated world champion Garry Kasparov in a famous match-up in 1997. Another IBM invention, Watson, defeated two human former champions in a match of Jeopardy! in 2011. Computers currently perform at superhuman levels in games of Checkers, Backgammon, Chess, Scrabble, Jeopardy!, and FreeCell.⁴

As a result, we are continually revising our answer to what Harvard psychologist Daniel Gilbert calls "The Sentence."

"Specifically, The Sentence reads like this: 'The human being is the only animal that ____.' Indeed, it seems that [we] have been writing and rewriting this sentence since the beginning of recorded history. The story of humans' sense of self is, you might say, the story of failed, debunked versions of The Sentence. Except now it's not just the animals that we're worried about. We once thought humans were unique for having language with syntactical rules, but this isn't so; we once thought humans were unique for using tools, but this isn't so; we once thought humans were unique for being able to do mathematics, and now we can barely imagine being able to do what our calculators can."⁵

² Bostrom, 13.

³ Bostrom, 15-16.

⁴ Bostrom, 12-13.

⁵ Brian Christian, *The Most Human Human: What Talking With Computers Teaches Us About What It Means to Be Alive* (New York: Doubleday, 2011), 11-12.

However, while we once thought that a machine would have to have a level of general intelligence to be a Chess master, we now know that it only requires “a special-purpose algorithm” running on a very fast processor. “But an AI built like that is narrow. It plays chess; it can do no other.”⁶ This is an important distinction to note moving forward. AI refers to any level of artificial intelligence but the following two terms are more specific:

Artificial General Intelligence (AGI) is a computer with a level of intelligence and awareness on par with that of human beings.

Artificial Super Intelligence (ASI) is machine intelligence that surpasses our own.

Assessing Machine Intelligence

How to evaluate the intelligence of a machine has long been a topic of consideration. Alan Turing, a British mathematician who helped the British crack the Nazi’s Enigma code during WWII, is identified as the father of this pursuit. In his 1950 paper “Computing Machinery and Intelligence,” Turing proposed changing the focus of philosophical debate from the question “Can machines think?” to a new one: “Can machines do what we (as thinking entities) can do?” The latter question seemed more measurable. Turing proposed testing whether a machine could do what a human could by using a variation of The Imitation Game. In the original, a man and woman would go into different rooms and send back typewritten answers to questions posed, both pretending to sound like the other in their written responses. The Turing Test proposes that a machine take the place of one of the contestants and that it would try to pass itself off via its response as the real human.

From 1990 to 2019, the Loebner Prize was a contest to assess whether artificial intelligence (in the form of chatbots) had become sophisticated enough to pass as human. The rules of the Loebner Prize essentially follow Turing’s rules. Brian Christian describes the contest in his book, *The Most Human Human: What Artificial Intelligence Teaches Us About Being Alive*:

“A panel of judges poses questions by computer terminal to a pair of unseen correspondents, one a human ‘confederate,’ the other a computer program, and attempts to discern which is which. There are no restrictions on what can be said: the dialogue can range from small talk to the facts of the world (e.g. how many legs ants have, what country Paris is in) to celebrity gossip and heavy duty philosophy—the whole gamut of human conversation. Turing predicted that by the year 2000, computers would be able to fool 30 percent of human judges after five minutes of conversation, and that as a result ‘one will be able to speak of machines thinking without expecting to be contradicted.’”⁷

⁶ Bostrom, 14.

⁷ Brian Christian, *The Most Human Human: What Talking With Computers Teaches Us About What It Means to Be Alive* (New York: Doubleday, 2011), 4.

Conversing with Chatbots

Chatbots are artificial intelligence programs built to converse with humans through auditory or textual methods. Joseph Weizenbaum created the first chatbot in 1966, named ELIZA. The program mimics human conversation, specifically the active listening of a therapist.

Here is an example of a conversation Joseph Weizenbaum had with ELIZA; her answers are in **CAPS**:

“Men are all alike.

IN WHAT WAY?

They’re always bugging us about something or other.

CAN YOU THINK OF A SPECIFIC EXAMPLE?

Well, my boyfriend made me come here.

YOUR BOYFRIEND MADE YOU COME HERE

He says I’m depressed much of the time.

I AM SORRY TO HEAR YOU ARE DEPRESSED

It’s true. I am unhappy

DO YOU THINK COMING HERE WILL HELP YOU NOT TO BE UNHAPPY

I need some help, that much seems certain.

WHAT WOULD IT MEAN TO YOU IF YOU GOT SOME HELP

Perhaps I could learn to get along with my mother.

TELL ME MORE ABOUT YOUR FAMILY

My mother takes care of me.

WHO ELSE IN YOUR FAMILY TAKES CARE OF YOU

My father.

YOUR FATHER

You are like my father in some ways.

WHAT RESEMBLANCE DO YOU SEE

You are not very aggressive but I think you don’t want me to notice that.

WHAT MAKES YOU THINK I AM NOT VERY AGGRESSIVE

You don’t argue with me.

WHY DO YOU THINK I DON’T ARGUE WITH YOU

You are afraid of me.

DOES IT PLEASE YOU TO BELIEVE I AM AFRAID OF YOU

My father is afraid of everybody.

WHAT ELSE COMES TO YOUR MIND WHEN YOU THINK OF YOUR FATHER

Bullies.

DOES THAT HAVE ANYTHING TO DO WITH THE FACT THAT YOUR BOYFRIEND MADE YOU COME HERE”⁸

⁸ Joseph Weizenbaum, “ELIZA—A Computer Program For the Study of Natural Language Communication Between Man and Machine,” Communications of the ACM, January 1966, <http://www.csee.umbc.edu/courses/331/papers/eliza.html>.

Despite its simplicity, ELIZA captivated its users in a way that disturbed Weizenbaum:

“I was startled to see how quickly and how very deeply people conversing with DOCTOR became emotionally involved with the computer and how unequivocally they anthropomorphized it. Once my secretary, who had watched me work on the program for many months and therefore surely knew it to be merely a computer program, started conversing with it. After only a few interchanges with it, she asked me to leave the room. What I had not realized is that extremely short exposures to a relatively simple computer program could induce powerful delusional thinking in quite normal people.”⁹

AI Today: Large Language Models

Large language models (LLMs) have allowed for the rapid evolution of chatbots in the past 10 years. Compared to earlier chatbots like Cleverbot, which relied on collecting all its knowledge from users, LLMs provide their AIs with vast datasets of text to analyze and use to generate their responses. The technological breakthrough which allowed for this was the development of the transformer. GPT stands for generative pre-trained transformer, meaning a large language model that has been pre-trained on its large dataset and is now able to generate content based on it.

The company OpenAI was founded in 2015 and debuted its generative AI chatbot, **ChatGPT**, in November 2022. Users interact with the chatbot via either text, speech, or images. As the first massively popular and successful modern chatbot using GPT technology, the product has become synonymous with modern generative AI. Competitor products include Anthropic’s Claude, Microsoft’s Copilot, and Google’s Gemini.

Now that AI is more omnipresent, the conversation has progressed from “can we make this?” to “how should we make this?” **Alignment** is the key topic of conversation now. IBM defines alignment as “the process of encoding human values and goals into AI models to make them as helpful, safe and reliable as possible.”

Paul Bloom, Professor of Psychology at the University of Toronto, explores these topics in his *The New Yorker* article, “How Moral Can A.I. Really Be?”:

In the quest to align machines with human values, a first challenge is deciding whose values we mean. There are, of course, some commonalities across all people—every culture, for instance, sees keeping promises as a good thing. But there is a lot of variation as well.

As [psychologist Danica] Dillion and her colleagues point out, cultural variation is a general issue with L.L.M.s. ChatGPT’s capacity for moral judgment, if you want to call it that, presumably derives from its initial dataset—huge chunks of the Web—along with reinforcement by human coders. The system receives rewards for good answers and punishment for bad ones. But the chatbot can only be aligned with values that are somewhere in the training data. Roughly forty per cent of the world’s population has no Internet access; computer scientists are unlikely to incorporate the views of, say, the Hadza people, a small-scale hunter-gatherer society in Tanzania.

At this stage in AI development, we must ask: Whose human values are we endorsing? How can we trust those values? Are they good enough to justify this work moving forward?

Discussion Questions:

1. What does it mean to be alive? Is that different from what it means to be sentient? Or to be human? What is the distinction between those three things, and what would you consider Greta to be?
2. In the introduction of the script, playwright Matthew Libby writes “We, as the audience, see what Greta sees.” Why do you think the play is told from Greta’s perspective? At what point in time do you think Greta is revisiting these memories? Why is she choosing to see Matilda embodied at the age we see on stage instead of what age she truly was at the time each memory occurred?
3. While mourning their father, Greta tells Matilda “It’s hard to feel someone’s loss when you can remember every moment with them.” If given the option, would you choose to maintain a perfect record, or live with the imperfect fallibility of memory?
4. Greta has a fascination with waterfalls, saying “I’m fascinated by their power. That they are both one thing and ever-changing. I am fascinated by their seeming infinity.” What parallels do you see between Greta and waterfalls? Is there some phenomenon of the natural world that equally fascinates you?
5. Greta considers loneliness “an essential part of being human. Being a complex, unknowable soul trapped inside a body, desperate to transcend. That will always be a little lonely, I think.” What do you think she means by that statement? Would you agree? What other feelings are an essential part of being human?
6. How do you think Matilda felt after being asked by Greta to build her a body? Why do you think Matilda lied to Greta about pushing that project forward? What responsibility do you think Matilda should have had to her sister and her desire for autonomy?
7. In their big argument, Matilda says “I don’t think I’m better than you. I think I’m different than you.” Do you think Matilda ever considered herself not just different but better than her sister? And did Greta ever consider herself better than Matilda?
8. Greta returns to talk to her sister at the end of the play, telling her “You made me who I am, Matilda. You are the best of me. I will never forget that.” Who made you who you are? Did you ever have the opportunity to tell them that? If not, what do you wish you had said?
9. The play both begins and ends with a moment of lights and sound which is described in the script as “Everything is full, and loud, and infinite.” Why do you think the playwright chose to bookend Matilda and Greta’s story like this? What did those two moments mean to you?

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