



Game Theory

Creative Learning
2024 Teacher Resources



Game Theory

Notes for Teachers

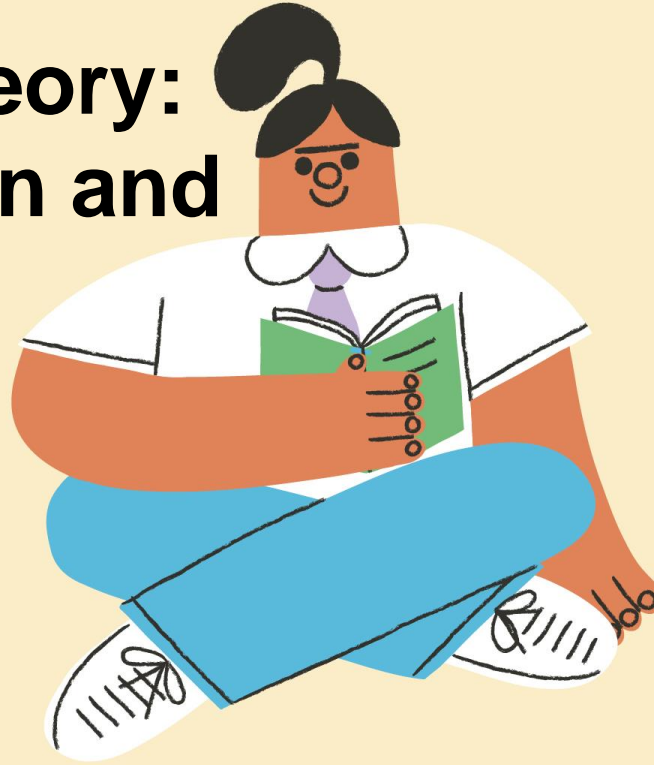
The following Creative Learning Notes contain video links and suggested activities to build on an excursion to *Game Theory*. We recommend using this resource as a starting point, to adapt content in a way that suits the learning needs of your students.

In *Game Theory* dance and drama converge to shed light on the profound themes surrounding play and its intrinsic ties to human emotion and experience. Dance, traditionally seen as choreographed movement, is reimaged through the lens of games – merging movements reminiscent of historical and traditional games with personal artistic expression.

Looking at *Game Theory* from the perspective of Drama provides depth by unravelling the rich tapestry of emotions, strategies, and societal reflections inherent in games, allowing for a profound exploration of character motivations and the narratives deeply embedded in play.

Beyond the stage, the essence of *Game Theory* explores content addressed in Personal Development, Health, and Physical Education, spotlighting the intricate dance between physical exertion and emotional well-being. Collectively, these themes underscore the transformative power of games, emphasizing their influence on individual emotions, societal norms, and group dynamics.

Game Theory: inspiration and research



Dance was a game before it became an art. **Game Theory** and the games that fascinate us

The games we like the best are often the ones that have consequences and risks, games that are more than just a game, games that make our head spin and can break our heart. Any visit to any playground, a stadium, or a dog park shows just how exciting play can be.

Inspiration for the creation of the dance production *Game Theory* came from the virtuoso movements that arise during an intensely played game. Such movements are characterized by characterized by fluid virtuosity, un-self-consciousness and intuition. The performers explore the emotions triggered by intense play: the jolt of adrenaline, the sting of defeat, the spontaneous empathy between players and spectators, the tension of not know what comes next.



Behind the scenes

Inspiration and research

The dancers were inspired by the spontaneous beauty and highly emotional events when people, even animals, play sports and games.

In their research, the artists recorded the raw, unbiased movements from game situations and were used as building blocks for the choreography. These often brutal and disordered movements became the material helped developed the aesthetic of the performance and composition of movement.

The work has been performed outside in playgrounds and indoors in gymnasiums. The different scenes in the performance allow audience to focus on the individual physical, social and psychological aspects of play and games.



Joshua Monten

Artist Biography

The Swiss-American choreographer and dancer Joshua Monten was born near New York City. He studied literature and cultural anthropology at Duke University before discovering dance at the relatively late age of 20.

In 2012 Joshua Monten founded his own dance company. The Joshua Monten Dance Company has subsequently given hundreds performances at festivals and theaters around the world, including DreamBig in Adelaide, Chalon dans la rue, Swiss Contemporary Dance Days, Krokusfestival Hasselt, Festival de Chassepierre, Sibiu International Theatre Festival, Shanghai International Dance Center, Esplanade Theatre in Singapore, Ramallah Dance Festival in Palestine, CIFICET Festival in Cairo, Festival de Danza Nueva in Lima, and Queer New York International Arts Festival.

Joshua Monten regularly choreographs for theater, opera, ballet, museums and arts outreach programs — indeed, his work as a choreographer is deeply informed by these encounters with diverse audiences and varied forms of artistic expression.



The Joshua Monten Dance Company

Artist Biographies

David Pallant (dancer) was born in England and studied dance at Central School of Ballet in London and the Conservatoire National de Paris. Since completing his studies he has worked with numerous dance companies around Europe, including the National Dance Company Wales, Stadttheater Heidelberg, Club Guy & Roni and Compagnia Zappalà Danza. He began dancing with the Joshua Monten Dance Company in 2017, and has toured widely in the productions “Joy” and “Romeo, Romeo, Romeo.”

Frederik Kaijser (dancer) studied in Rotterdam at the Codarts University of the Arts, where he danced in choreographies by Jiří Kylián, Martha Graham, Stephen Shopshire and Kyle Abrahams. During a one-year internship at the Scapino Ballet Rotterdam he worked with the choreographers Ed Wubbe, Marcos Moreau and Felix Landerer. After graduating, he worked freelance with numerous dance companies, including Dansateliers Rotterdam, the Dutch National Opera, the Dutch Travel Opera and Arno Schuitemaker. He has worked with Joshua Monten since 2019.

Katharina Ludwig (dancer) completed her training at the Iwanson School of Contemporary Dance in Munich and her master's degree in Movement Research at the Anton Bruckner University in Linz. As a freelance dancer she worked e.g. with the DAGADA Dance Company / Karolin Stächele and most recently with Wim Vandekeybus at the International Theater Amsterdam under the direction of Ivo van Hove. She has collaborated with Joshua Monten on “The Pursuit of Happiness,” “How to Do Things with Words” and “Game Theory.”

Hannah Thomas (dancer) studied at the Balletboyz’ Dancer’s Course and received her BA degree with distinction from Trinity Laban Centre in London. From 2021-2022 she was a member of the Wee Dance Company in residence at the Theater Görlitz-Zittau in Germany. Her movement language as a dancer has been indelibly influenced by experiences with rock climbing, bouldering, snowboarding and skateboarding. Her first production with Joshua Monten was “Faking It” in 2023.

Jack Wignall (dancer) after completing his studies at the Northern School of Contemporary Dance in Leeds, Jack Wignall moved to Malmö to perform with Skånes Dansteater. He has studied intensively with David Zambrano and presently works as a freelance dancer and teacher. He has worked regularly with Joshua Monten since 2015, appearing in a dozen productions on tour in 30 countries. In 2018 he began working as an aerial dancer with Off Aerial Dance.

**Game Theory:
the science
of strategy**



What exactly is Game Theory?

An interpretation of the *Game Theory* performance by Gedankenwelt (translated from German to English)

Game theory is perhaps one of the most important theories of recent decades. It has had innumerable repercussions on disciplines such as psychology, politics, biology, technology, economics, sociology and especially mathematics.

Game theory is a mathematical method that focuses on rational decision-making in conflict situations. Success depends not only on the actions of an individual, but also on those of other participants.

This theory is already old, but John Neumann took an important step in 1928 by proving the Min-Max theorem, which is considered the starting point of modern game theory. In 1944, he published the book “Game Theory and Economic Behavior” with Oskar Morgenstern.

Interest in game theory has by no means diminished. In total, 16 game theorists have received the Nobel Prize in Economics. The latest is Jean Tirole in 2014.

What exactly is Game Theory?

(continued)

Basically, it's about controlling rational behavior in decision-making situations in order to find solution concepts. In general, the following elements play an important role:

Number of players: Every person who makes a decision in a game or receives a bonus or reward is a player.

Strategies: Players have a limited range of strategies, moves and choices. Sometimes the number is the same for all players, sometimes not.

Perfect information: A game has perfect information if the players know the previous game events and know about the decisions the other players have already made or about random decisions.

Constant sum: This concept refers to the sum of payouts or rewards when they match the number of strategies.

Random Movements: Every game and therefore every player is inherently exposed to random movements, actions or strategies.

Game Theory

The psychology and science of strategy

After reading the interpretation of *Game Theory* (the performance), consider the following:

- Use the PDHPE syllabus glossary to identify and define or explain key phrases and vocabulary relating to games, modifications to games and movement
- Come up with your own definition of game theory from your research
- Brainstorm different types of games. List the key components of a game, and consider why they're important to the game.
- Who can you play a game with? How might you describe the relationship or behaviors and action between players in a game?
- What kinds of skills do you need when playing a game?
- What characteristics make a game bad or good?

Conversation starters



Conversation Starters

To play means to act out situations that are not possible or not allowed in daily life. To play means to destroy and create, to flirt with danger, to release one's animal energies, to experience the thrills of domination and being dominated. The games we like the best are often the ones that have consequences and risks, games that are more than just a game, games that make our head spin and can break our heart.

Gaming is a thread that connects many of Joshua Monten's previous work. In *Game Theory*, Monten looks a bit more deeply at the basic building blocks of play: freedom and rules, ritual and surprise, adrenaline and flow.

Game Theory is a kinesthetic portrait of play – a typology of play's basic forms – which is highly personal and still immediately recognisable. The result is an aesthetically rigorous composition with ample room for freedom and joy.

[Watch the *Game Theory* trailer here](#)

— As a class, discuss your immediate feelings or thoughts about the performance?

Conversation Starters

- What does play mean to you? Discuss in pairs and then as a class.
- How do you think play can be incorporated into dance? Consider how a dancer moves, the choreography, music and setting.
- Consider your own routines and hobbies. How might you choreograph movement inspired from these everyday activities?
- How can dance mirror or amplify everyday routines or activities, like gaming or play? Why would dance be an effective medium to do this?

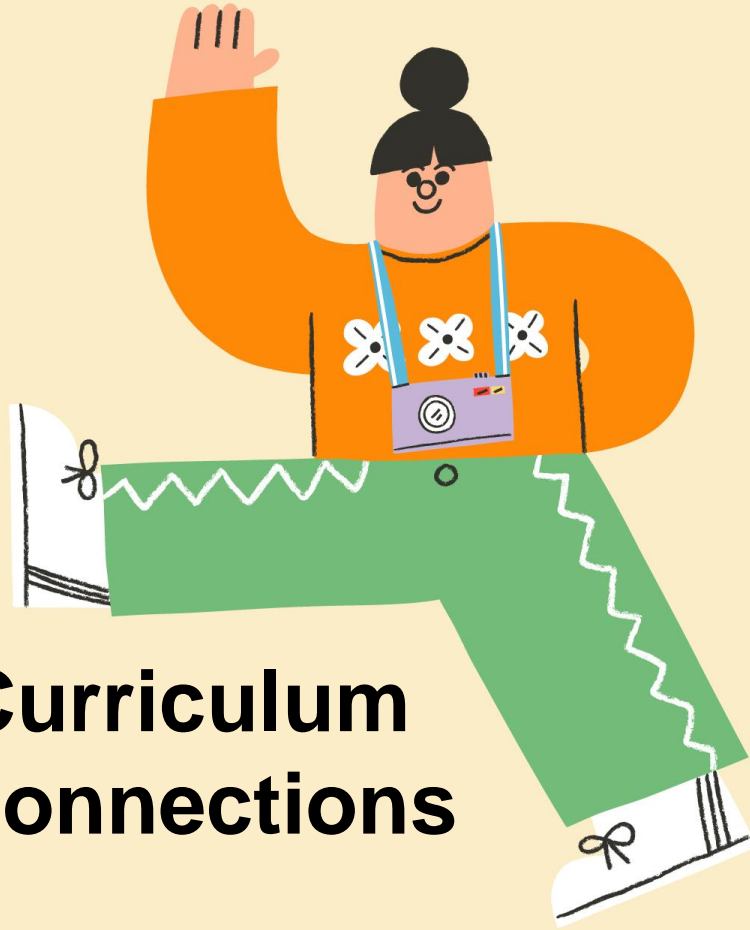


In the classroom

Following the performance

- Create a short dance piece inspired by your favourite game, emphasising the relationship between content, meaning, and context. You might like to start by breaking down the techniques, skills and movements specific to the game, and use this as a platform to build choreography by repeating, mirroring or distorting the movement into a variety of new sequences.
- Inspired by *Game Theory*, write and perform monologues that convey the intense emotions related to winning, losing, or simply playing a game.
- After performing a chosen physical activity (a game of tennis, basketball etc.), map out the range of emotions you experienced on a chart. Discuss the correlation between physical exertion, competition, and emotional response





Curriculum connections

Curriculum Links

Connecting with the classroom

Game Theory can be integrated into a Dance unit by exploring the connection between play and dance, allowing students to transform traditional games into choreographic movements. In Drama, the play serves as inspiration for character studies, scriptwriting, and improvisational sessions that delve into the emotional depths of games. For PDHPE, it acts as a springboard to discuss the interplay between physical exertion, emotional response, safety in games, and overall well-being.

Dance

- DAS3.3 Discusses and interprets the relationship between content, meaning and context in their own and others' dances
- 4.4.1 Values and appreciates their involvement as a dance performer, composer and audience member and how their involvement contributes to lifelong learning
- 5.4.1 Values and appreciates their involvement as a dance performer, composer and audience member and how their involvement contributes to lifelong learning
- P4.5 Values the diversity of dance from national and international perspectives
- H4.5 Acknowledges that the artform of dance is enhanced through reflective practice, study and evaluation

Curriculum Links

Connecting with the classroom

Drama

- DRAS3.4 Responds critically to a range of drama works and performance styles
- 4.3.1 Identifies and describes elements of drama, dramatic forms, performance styles, techniques and conventions in drama
- 4.3.2 Recognises the function of drama and theatre in reflecting social and cultural aspects of human experience
- 4.3.3 Describes the contribution of individuals and groups in drama using relevant drama terminology
- 5.3.1 Responds to, reflects on and evaluates elements of drama, dramatic forms, performance styles, dramatic techniques and theatrical conventions
- 5.3.2 Analyses the contemporary and historical contexts of drama
- 5.3.3 Analyses and evaluates the contribution of individuals and groups to processes and performances in drama using relevant drama concepts and terminology
- P2.5 Understands and demonstrates the commitment, collaboration and energy required for a production
- P2.6 Appreciates the variety of styles, structures and techniques that can be used in making and shaping a performance
- H2.4 Appreciates the dynamics of drama as a performing art
- H2.5 Appreciates the high level of energy and commitment necessary to develop and present a performance

Curriculum Links

Connecting with the classroom

PDHPE

- PD2-6 Describes how contextual factors are interrelated and how they influence health, safety, wellbeing and participation in physical activity
- PD4-6 Recognises how contextual factors influence attitudes and behaviours and proposes strategies to enhance health, safety, wellbeing and participation in physical activity
- PD5-6 Critiques contextual factors, attitudes and behaviours to effectively promote health, safety, wellbeing and participation in physical activity
- P8 Describes the components of physical fitness and explains how they are monitored
- H8 Explains how a variety of training approaches and other interventions enhance performance and safety in physical activity

Resources

More about the Sydney Opera House

Sydney Opera House: Our Story

- <https://www.sydneyoperahouse.com/our-story>

How we work – strategic plans and programs

- <https://www.sydneyoperahouse.com/about-us/how-we-work>

Community projects

- <https://www.sydneyoperahouse.com/about-us/in-the-community>

Careers and opportunities

- <https://www.sydneyoperahouse.com/about-us/careers-and-other-opportunities>

Creative Learning resources

- <https://www.sydneyoperahouse.com/learn/teachers-and-students/classroom-resources>

50th Anniversary Celebrations

- <https://www.sydneyoperahouse.com/50>

Get in touch

Got questions? Contact us with any enquiries about our education programs for schools via phone or email.

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