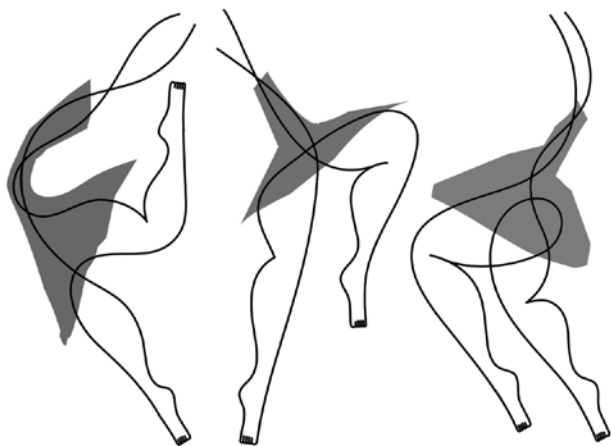


THE DANCE CURE

*The surprising science to being
smarter, stronger, happier*



DR. PETER LOVATT



HarperOne

An Imprint of HarperCollinsPublishers

The content of this book is intended to inform, entertain, and provoke your thinking. This is not intended as medical advice. Neither the author nor the publisher can be held responsible or liable for any loss or claim arising from the use, or misuse, of the content of this book.

THE DANCE CURE. Copyright © 2021 by Peter Lovatt. All rights reserved. Printed in the United States of America. No part of this book may be used or reproduced in any manner whatsoever without written permission except in the case of brief quotations embodied in critical articles and reviews. For information, address HarperCollins Publishers, 195 Broadway, New York, NY 10007.

HarperCollins books may be purchased for educational, business, or sales promotional use. For information, please email the Special Markets Department at SPsales@harpercollins.com.

Originally published as *The Dance Cure* in the UK in 2020 by Short Books.

First HarperOne hardcover published 2021

Interior illustrations © *Helena Sutcliffe*

FIRST EDITION

Library of Congress Cataloging-in-Publication Data has been applied for.

ISBN 978-0-06-304688-7

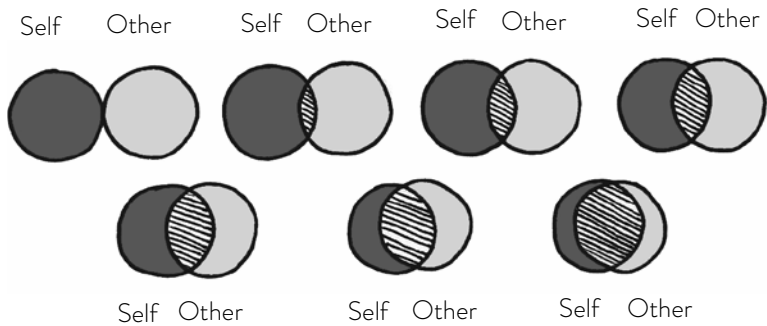
21 22 23 24 25 LSC 10 9 8 7 6 5 4 3 2 1

The dancing dons at Oxford tested the relationship between dancing, pain and social bonding and found that they were all linked. Hundreds of people were taught some simple dance moves and then split into two groups, the same-dance group and the different-dance group. The former had to perform the same dance moves at the same time as each other (imagine a group of people all doing the Macarena in perfect unison), while the latter had to do a different set of movements at the same time (imagine three people in a group, one of them doing the Macarena, another person doing the Hokey Pokey, and the third doing the Hustle). Then they measured both groups' pain threshold, by inflating a blood pressure cuff on their arm until the pain became unbearable. Finally, they asked everyone questions about how socially bonded they felt to the people they were dancing with. Here are some of the questions they asked:

- How much do you trust the people you were dancing with?
- How connected do you feel to the people you were dancing with?
- How likable are the people you were dancing with?

- How similar in personality do you feel to the people you were dancing with?

They also asked the participants to look at a series of circles and to pick the one that best represented their relationship with the other dancers (see diagram below).



Take the Dr. Dance Terpsichorean Personality Quiz to see how you signal your personality as you dance.

Imagine you're dancing at a party or at a wedding, and answer the following questions:

	Disagree	Neutral	Agree
I am always trying out new dance moves	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I pay attention to the correct detail of the dance; it's important to get it right	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Everyone notices me when I dance	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I dance in the same way as everyone else	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I am absolutely terrified to dance	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

The way you answered these questions will reveal something about your personality. Let's take them one by one.

I am always trying out new dance moves

Your answer to this statement tells us about your openness to new experiences. Trying out new dance moves is a sign that you like to learn new things and that you enjoy new experiences and complexity. This is linked to personality traits such as insightfulness, imagination and spontaneity. If you disagreed with this statement, it suggests you are relatively conventional and perhaps more on the rational than the creative side.

*I pay attention to the correct detail of the dance;
it's important to get it right*

This tells us how conscientious you are. Paying close attention to the details of the dance is a sign that you are dependable and self-disciplined, and of an organized and thorough nature. If you disagreed with this statement, it suggests that you may be somewhat disorganized or careless.

Everyone notices me when I dance

The way you answered this statement tells us how extroverted you are. Dancing in a way that makes everyone notice you is a sign that you are enthusiastic and that you get your energy and drive from other

people, and are of an energetic, assertive and talkative nature. If you disagreed with this statement, it suggests you are more reserved and quiet, apt to watch and wait before you leap into things.

I dance in the same way as everyone else

The way you answered this statement tells us how agreeable you are. Dancing in the same way as everyone else is a sign that you are cooperative and friendly, and of a warm and sympathetic nature. If you disagreed with this statement, it suggests that you like going your own way, rather than following the crowd, but also that you tend to be critical and quarrelsome.

I am absolutely terrified to dance

The way you answered this statement tells us how neurotic you are. Being too afraid to dance in public might be a sign that you experience emotional instability and are feeling negative emotions. This could mean you are a person who is anxious and easily upset. If you disagreed with this statement, it suggests that you are calm and emotionally stable.

When we dance, our personality is just as vivid as a set of bright feathers, but dancing also sends signals that are much more deeply rooted than our personality.



There are three key elements of dancing that stimulate the creativity of the brain. Firstly, dancing raises the heart rate and gets the blood pumping through the arteries; secondly, it changes the way we move; thirdly, it changes our relationship with our physical surroundings. In this chapter I will show how these three elements can activate our cognitive pathways to change the way we think, solve problems and take risks, as well as enhance spatial awareness and mental agility.

Before we start, let's unpack the idea of "creativity." For a word that is used so ubiquitously, it can be hard to quantify. How creative are you? Is creativity measurable? Well, probably not in the truest sense, but there are standard measures, used in psychological testing for employment, and so on, which can at least help to demonstrate how the creative process works. I have included one of these below, a little situation-solution exercise called the Torrance Test of Creative Thinking, which defines the creative process as comprising four underlying components: fluency, flexibility, originality and elaboration. Have a go!

The situation: Bobby set off for school, but never arrived.

The solution: Give yourself three minutes to write down as many reasons as possible for why Bobby did not arrive at school.

Here are some of the reasons I came up with:

1. Bobby had fallen in love with another student, and they decided to skip school and spend the day in the park.

2. Bobby was run over by a bus.

3. Bobby was run over by a car.

4. Bobby was a dog, who walked to school with his owners every day. Bobby saw a cat, he pulled on his lead, which broke, and he chased the cat around the village pond. His owner was furious. She gave her child to a friend to take to school and spent the next 20 minutes calling Bobby's name. When she got him back on his lead, he was soaking wet, so she took him straight home. That's why Bobby didn't arrive at school.

5. Bobby and his dad were driving to school in the snow. They heard on the radio that due to the snow all the schools were closed, so they turned around and went home.

Let's now study the results and work out how creative you are. Start by counting how many reasons you thought of. This is your fluency score. I scored 5 for creative fluency. For your flexibility score, count how many different types of answers you gave. I thought of four different types of answers, as reasons 2 and 3 are essentially the same—he was run over by something. Next, think about how original your answers are, i.e., how unique your answers are compared with the answers you think other people would give. Of my five answers, I would say that three would qualify as original—the idea that Bobby had fallen in love, that he was a dog and that he was driving to school in the snow would probably not be the first thoughts in people's minds, whereas lots of people would likely say that Bobby was run over by something, working on the assumption that people worry about young children and road safety. Finally, to arrive at your creative elaboration score, score each response out of 10 for complexity. My most complex answer is number 4, because I go into a lot of detail about how Bobby is a dog, and there are lots of elements to the story.

ME-MOR-IIEEES!

How do dancers remember dance routines? Imagine you have to learn this sequence of dance steps from the page, or better still, have a go at learning it with your body.

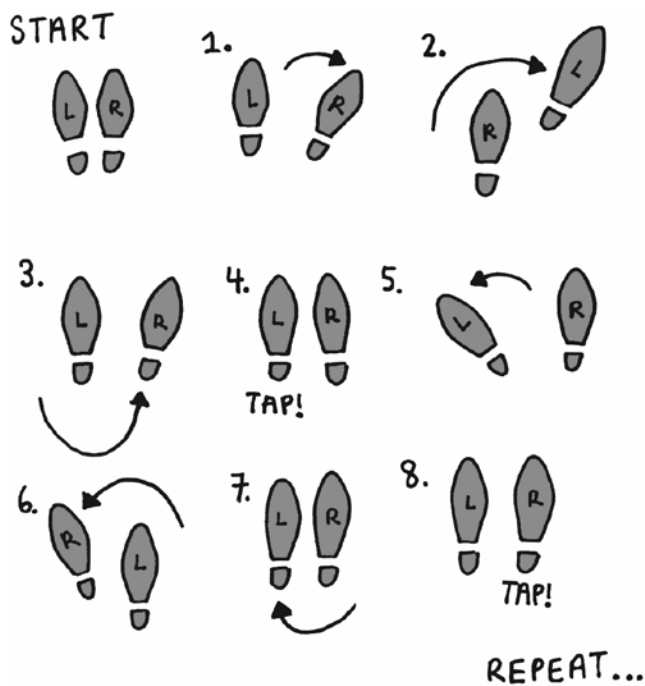
Face front.

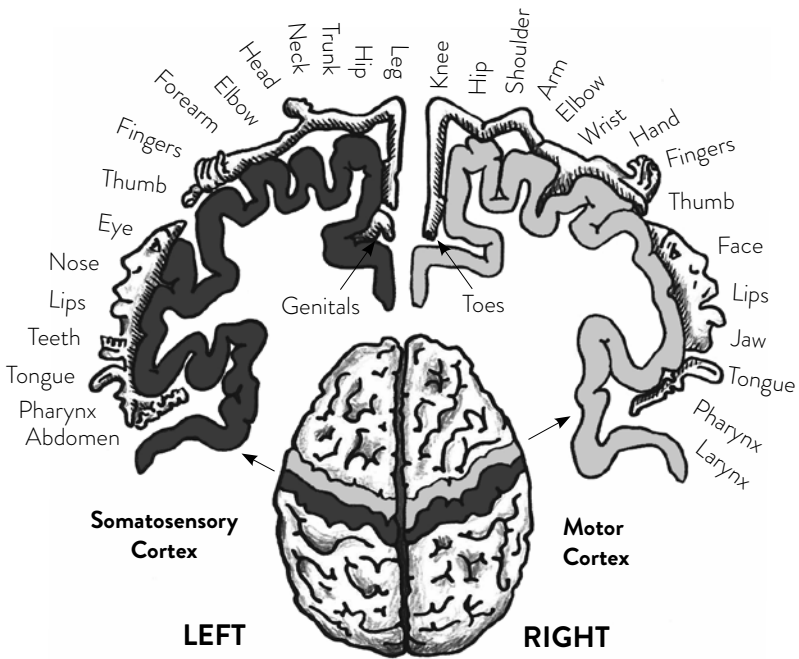
Start with your feet together.

1. Make a sideways step to the right with your right foot.
2. Make a sideways step to the right with your left foot, crossing your left foot in front of your right.
3. Make a sideways step to the right with your right foot.
4. Tap your left foot on the floor next to your right foot.
5. Make a sideways step to the left with your left foot.
6. Make a sideways step to the left with your right foot, crossing your right foot in front of your left.
7. Make a sideways step to the left with your left foot.

8. Tap your right foot on the floor next to your left foot.

Now repeat this sequence several times.





A neurological “map” of the areas of the human brain dedicated to processing motor functions, or sensory functions, for different parts of the body. Note that the size of each region is related not to its actual size, but to the complexity of the movements it can perform.

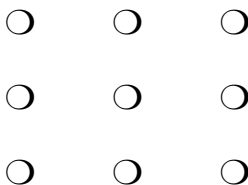
LEAP BEFORE YOU LOOK

Just as improvised dancing pushes the brain out of its comfort zone to think spontaneously, so changing the space and environment we move in can inspire us to think in new ways.

To prove this, I have devised a simple experiment you can try at home. Below are two problems to solve. Read them, follow my movement instructions and then try to solve the problems.

Problem 1: Nine dots

Here are nine dots. Can you draw four straight lines to connect all the dots, keeping your pen on the page?



Problem 2: Brothers

Imagine you're walking home late one night and feel lost. You get to a T-intersection and are unsure

which direction to take. At the junction are two people, brothers John and David. You know two things about them: one, they both know which way you have to go to get home; and two, one of them always tells the truth, and the other always lies, but you don't know which is which. You have one chance to ask them just one question. What single question do you ask to guarantee that you get the information you need to find your way home?

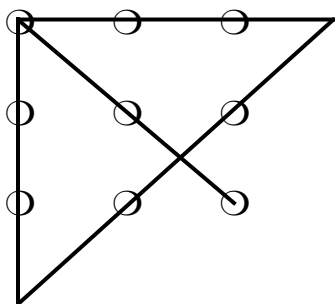
Now before trying to work these problems out, I want you to stand up and walk around the room in a random pattern for a few minutes. Don't walk in straight lines around the edge of the room; instead, change your direction every few steps—turn right, then left, make big looping turns and small, sharp turns. Now, see if you can work out the answers.

Solutions

Most people fail to find a solution to the nine-dot problem because they think “inside the box.” They try to find ways of connecting the nine dots by drawing only within the space of the nine dots, as if the dots on the outer edge of the “square” form a boundary that mustn't be crossed. To solve this problem, you must think “outside the box,” literally, because

you have to draw lines which go beyond what you perceive to be the boundary of the problem.

Here's the solution:



To solve the brothers problem, you have to come at it from a counterintuitive position. You want the truth, but you don't know who will tell you the truth. Therefore, there is no point asking either of the brothers for the truthful answer to your question, because you won't know for certain if it's true or false. You must ask a question that you know will give you the incorrect answer and then do the opposite of what they say. Let's assume that John always tells the truth and David always lies. You can only ask one question, so addressing either one of the brothers, the best question to ask is: Which way would your brother say is the correct way home? You need to factor in the lie and then do the opposite.



A group of scientists from Singapore, New York and Michigan published a study in 2012 that backs up the experiment you have just performed.²¹ They asked people to either walk around the perimeter of a square for two minutes or walk freely, in any way they liked, around a room. Remarkably, they found that the subjects' thinking was affected by the way they walked. Those who walked freely around the room scored higher in tests to measure creative originality than those who were constrained and could only walk around the perimeter.

Next time you walk to the store or move around your office or school, try to find a new route, or walk in a different pattern, and then see what new things

you notice. Look up, or down, walk backwards, sideways, zigzag and change direction. Walk upstairs as if you're on the set of a 1950s MGM musical, or you're Rocky Balboa in training for a big fight. Then make a list of all the things you've walked past hundreds of times before and never noticed. It doesn't matter how big or small the things are; just note them and realize how much of the world we don't see, even though it's right under our noses.

You will find that varying your environment and how you move through it can work wonders on your brain. Your creative mind will switch on, and you will start to see the world differently and think more imaginatively.

To give yourself a sense of how this works, try the following simple exercise:

- Stretch one arm out to the side.
- Stretch the other arm high above your head.
- Point the index finger of both hands.
- Close your eyes and then, keeping your eyes closed, move both hands in front of you and touch the tips of your index fingers together.

MOTIVATION CHECKLIST

HELPFUL MOTIVATIONS

- because I enjoy it
- because it is part of who I am
- because I value the benefits of dancing

UNHELPFUL MOTIVATIONS

- because I would feel guilty if I quit
- because people push me to dance,
but I question why I continue



- Stand in a circle and hold hands.
- Starting on your left foot, take eight steps to the left (this should take 8 counts), then take eight steps to the right (again, 8 counts).
- All walk into the middle of the circle and clap (this should take 4 counts—you clap on 4) and then walk back to where you started and hold hands (again, 4 counts).
- For the final 8 counts everyone should walk back into the middle, forming the circle again, but this time you must make sure you are standing next to someone different, ready to repeat the moves.

Remember that whenever you are lost for a little bit of movement or you want to bolster your mood, all you have to do is put on a piece of your favorite music and feel the groove. And if you want one sure-fire winning routine to do this, here is my Dr. Dance Happy Dance (for inspiration, follow the video link at www.peterlovatt.com):

Wave right hand, wave left hand (1–4)

Boogie on down (5–8)

Bow and arrow to the right (1–4)

Click twice to right side, twice to left side (5–8)

Bow and arrow to the left (1–4)

Click twice to left side, twice to right side (5–8)

Rainbow wave from right to left (1–4)

Rainbow wave from left to right (5–8)

Starting on your right foot

Take three steps forward and clap (1–4)

Take three steps backwards and clap (5–8)

Take three steps forward and clap (1–4)

Take three steps backwards and clap (5–8)

Take three steps to the right and clap (1–4)

Take three steps to the left and clap (5–8)

Take three steps to the right and clap (1–4)

Take three steps to the left and clap (5–8)

Step, turn, step to the right and clap (1–4)

Step, turn, step to the left and clap (5–8)

Step, turn, step to the right and clap (1–4)

Step, turn, step to the left and clap (5–8)

Right foot

Heal dig, toe tap, heal dig, toe tap (1–4)

Point right finger across your body and then
move it from left to right (5–8)

Heal dig, toe tap, heal dig, toe tap (1–4)

Point right finger high to the corner (John
Travolta-style) then down to your hip, twice
(5–8)

Heal dig, toe tap, heal dig, toe tap (1–4)

Point right finger across your body and then
move it from left to right (5–8)

Heal dig, toe tap, heal dig, toe tap (1–4)
Point right finger high to the corner (John
Travolta-style) then down to your hip, twice
(5–8)



THE DANCE APOTHECARY

This book would not be complete without a full list of remedies from *The Dance Cure* medicine cabinet. So, here are some of my favorite dance tunes, videos and things to turn to when you need inspiration.

DR. DANCE TOP TEN FAVORITE DANCE TUNES

1. MacArthur Park [Suite]—Donna Summer
(the full 17-minute version)
2. Lost in Music—Sister Sledge
(1984 Bernard Edwards and Nile Rogers Remix)
3. Rapper's Delight—The Sugarhill Gang
(12" version)
4. Wham Rap! (Enjoy What You Do?)—Wham!

5. On the Floor—Jennifer Lopez ft. Pitbull
6. Street Life—Crusaders (12" version)
7. Breakin' Down—Julia and Company
(12" version)
8. Wings (The Alias Radio Mix)—Little Mix
9. Turn the Music Up—The Players Association
(12" disco)
10. Don't Stop 'Til You Get Enough—
Michael Jackson (the 6-minute version)

DR. DANCE TOP TEN GROOVY TUNES (SCIENTIFICALLY INSPIRED)

1. Superstition—Stevie Wonder
2. Soul Bossa Nova—Quincy Jones
3. Flash Light—Parliament
4. Sing, Sing, Sing—Benny Goodman
5. In the Mood—Glenn Miller
6. Come Fly with Me—Frank Sinatra
7. Take Five—Dave Brubeck
8. Could You Be Loved—Bob Marley & the Wailers
9. Summertime—Al Jarreau
10. Don't Stop Me Now—Queen

DR. DANCE TOP TEN SHOW TUNES TO SING AND DANCE TO

1. Hello, Dolly!—*Hello, Dolly!* (the original cast recording from the film is my favorite)
2. Good Morning—*Singin' in the Rain* (original cast)
3. Lullaby of Broadway—*42nd Street* (original cast)
4. One—*A Chorus Line* (original cast)
5. Cabaret—*Cabaret* (Liza Minnelli version)
6. Simple Joys—*Pippin* (1972 original cast)
7. America—*West Side Story* (original cast)
8. If I Were a Rich Man—*Fiddler on the Roof* (original cast)
9. Don't Rain on My Parade—*Funny Girl* (the *Glee* cast version is my favorite)
10. I Am What I Am—*La Cage aux Folles* (the George Hearn version is my favorite)

DR. DANCE TOP TEN DANCE SCENES IN MOVIES

1. Moses Supposes—*Singin' in the Rain*
<https://www.youtube.com/watch?v=tcIT9bmCMq8>
2. What a Feeling—*Flashdance* (1983)
<https://www.youtube.com/watch?v=VzALZjolx0g>
3. Rhythm of Life—*Sweet Charity*
<https://www.youtube.com/watch?v=xKSA049xkiU>
4. Opening Sequence—*A Chorus Line*
(1985 movie version)
<https://www.youtube.com/watch?v=EHPdVnUour4>
5. Prologue—*West Side Story* (1961)
https://www.youtube.com/watch?v=bxoC5Oyf_ss
6. Hot Lunch Jam—*Fame* (1980)
<https://www.youtube.com/watch?v=QMMHut0t-HU>
7. We're All in This Together—*High School Musical*
https://www.youtube.com/watch?v=DykVJl6wr_4
8. Heaven—*Top Hat* (1935)
<https://www.youtube.com/watch?v=ILxo-TUkzOQ>
9. Shake a Tail Feather—*The Blues Brothers* (1980)
<https://www.youtube.com/watch?v=qdbrlrFxaS0>
10. The Broadway Melody Ballet—*Singin' in the Rain* (1952)
<https://www.youtube.com/watch?v=QOxprnWbzOco>

DR. DANCE TOP TWENTY QUICK DANCE FIXES

1. To feel graceful and proud—try ballet
2. To feel earthy and rhythmic—try tap
3. To feel your pulse and heartbeat—try jazz
4. To feel intellectual—try contemporary
5. To feel in the mood for a party—try Zumba
6. To feel fully alive—try disco
7. To feel young and urban—try street
8. To feel retro and trendy—try lindy
9. To feel spontaneous and competitive—try hip-hop
10. To feel ordered and united—try line dancing
11. To feel confident in your body—try belly dancing
12. To feel expressive yet controlled—try flamenco
13. To feel traditional and rooted —try folk
14. To feel up-close and personal—try Argentine tango
15. To feel strong—try pole dancing
16. To feel cheeky—try burlesque
17. To feel motivational—try cheerleading
18. To feel emotional—try musical theatre
19. To feel sexy—try rumba
20. To feel socially connected—try ceilidh