

A DOCUMENTARY BY DREAMFILM PRODUCTIONS
In association with the Canadian Broadcasting Corporation

PREMIERES THURSDAY
DECEMBER 5TH AT 8 P.M. (8:30 NT) on
CBC Television's "The Nature of Things"

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TABLE OF CONTENTS

SHORT SYNOPSIS	3
LONG SYNOPSIS	4
EXPERT BIOS	6
Q&A: WITH DIRECTOR + WRITER, BRUCE MOHUN	8
PRODUCTION BIOS	9
ABOUT DREAMFILM PRODUCTIONS	10
PRODUCTION CREDITS	11



SHORT SYNOPSIS

"Where Am I?" is about the complex skills we use to find our way around. The hour-long documentary for CBC Television's **"The Nature of Things"** with David Suzuki explores the strategies we use to figure out where we are going, the navigational skills we share with animals – and some we wish we had – and the widely-held assumption that men are better navigators than women. Can you be a terrible navigator from birth? What is the link between GPS and the structure of our brain? Some of us seem to always know where we are, while others rarely do. What makes the difference? A documentary by Dreamfilm Productions, **"Where Am I?"** premieres **Thurs., Dec. 5 at 8 p.m. (8:30 NT) on CBC Television's "The Nature of Things."**



For a sneak preview of **"Where Am I?"** [click here](#)

BRIEF SYNOPSIS

"Where Am I?" is about the skills we use to find our way around. Some of us seem to always know where we are, while others rarely do. What makes the difference?

BROADCAST DETAILS

"Where Am I?" airs **Thursday, Dec 5 at 8 p.m. (8:30 NT) on CBC TV's "The Nature of Things."**



LONG SYNOPSIS

"Where Am I?" is a new documentary for CBC Television's "The Nature of Things" with David Suzuki about the skills we use to find our way around. Whether you are an Inuit hunter, a foraging insect, or just someone out for a stroll, your brain is performing one of its most fundamental services – it's navigating. Why are some of us good at finding our way, while others are not?

Good navigators are able to use both memory and imagination... remembering where they have been, and imagining where they're going. Some researchers believe we build a cognitive or mental map when we navigate, a kind of bird's eye view of our surroundings. It is a view that can be rotated and examined in our mind. There has been about sixty years of argument amongst scientists about whether humans and other mammals actually form these cognitive maps or not.

The advent of GPS or Global Positioning Systems has changed the discussion about navigation. GPS triggers a simpler, more automatic navigational technique that does not involve building a mental map. With GPS, we simply respond to directions and may not truly understand where we are.

Some researchers believe that if you are not building mental maps, then you are not building a healthy hippocampus, the part of the brain that is linked to Alzheimer's disease and other kinds of mental disorders. The concern is that this could possibly lead to early senility. Studies have shown that about half of us favour building mental maps, while half favour "stimulus response", like following the directions of a GPS, or knowing that you should turn at a specific landmark. The most talented navigators can use both techniques, and pick the best one for the specific situation.

Perhaps the trickiest area for researchers to study is the question of who are better navigators, men or women? Most tests show that men are better at building a mental map and understanding where they are even in the absence of landmarks. But given enough landmarks, women are just as good - and they are much better at finding objects.



LONG SYNOPSIS con't

But is it nurture or nature that shapes our ability to find our way? Men have traditionally been freer to explore the world without worrying about personal safety, while women have historically stayed closer to home. Men also tend to do more of the driving, and drivers learn routes better than passengers.

Or perhaps it is the genetic imprinting from 100,000 years of hunting and gathering that has led men to be better wayfinders, and women to be better at finding objects.

But all of us - men and women - sometimes get lost because we simply are not paying attention to where we are. And maybe that's a good thing. "I actually love the sensation of becoming lost," says wayfinding expert Colin Ellard. "I get lost on purpose. Because I think that when you lose that kind of comfortable feeling of knowing your place, that everything kind of 'pops', and you experience the here-and-now much more immediately."

EXPERT BIOS

SUE BECKER

Sue is a cognitive neuroscientist at McMaster University in Hamilton, Ontario. She studies, among other things, which regions of the brain are used in wayfinding, in relation to both memory and imagination.

VÉRONIQUE BOHBOT

Véronique is a cognitive neuroscientist at McGill University's Douglas Institute who uses navigation as a model to understand the relative contribution of different memory systems in different populations of people. She's concerned that the reduced use of cognitive mapping in western populations is leading to earlier senility.

COLIN ELLARD

Colin is a psychologist at the University of Waterloo who specializes in how urban design affects our ability to find our way. He's written a book called *Where Am I?* in which he looks at the history of wayfinding studies in animals and humans, and how that affects the way we design our cities.

GIUSEPPE IARIA

Giuseppe is a cognitive neuroscientist at the University of Calgary, studying human spatial memory and orientation. He is trying to understand a condition he calls Developmental Topographical Disorientation, or DTD, and is searching for ways to overcome it.

KEN JENNINGS

Ken is an author and won more than \$2.5 million on the American game show "Jeopardy". He had an unparalleled 74-game winning streak and also competed against the IBM computer 'Watson'. Ken has written a book about people who are obsessed with maps called "Maphead". He lives in Washington State in the US.



EXPERT BIOS con't

Additional Experts:

- Tom Collett, insect biologist, University of Sussex, England
- Hugo Spiers, neuroscientist, University College London
- Nora Newcombe, psychologist, Temple University, Philadelphia
- Daniel Montello, geographer and behaviourist, University of California
- Michael Mangan, biologist and roboticist, University of Edinburgh





Q&A: WITH DIRECTOR + WRITER, BRUCE MOHUN

1. What does the documentary set out to explain?

The doc sets out to pinpoint where navigational ability comes from. Why do some people seem to be born with a natural sense of direction – and some not?

2. Why are some people better than others?

Some people practice more, by travelling more. Using a map in combination with GPS builds a more successful cognitive map. Paying attention to where you are certainly helps. Simply being male seems to help. And being a driver rather than a passenger probably helps too.

3. Why did you make this documentary?

Like Ken Jennings, as a child I would read atlases in bed. I've had a lifetime love of maps and travel. And so I was curious about how an otherwise very intelligent woman like Ann Dodd can be without a sense of direction. I asked myself the question: what makes one person perfectly at home in a new place, while another person will remain hopelessly lost?

4. What were some interesting discoveries in the documentary?

Some interesting discoveries include:

- Animals have some superior navigational abilities – for example bees utilize visual template matching and ants practice a very precise form of path integration.
- Research also suggests we aren't as good at finding our way around as we used to be. We rely more on stimulus response (taking routes marked out by known landmarks or dictated by a GPS) rather than cognitive mapping (imagining the layout of the land from different perspectives.)
- There is a newly-coined scientific term for those who lack a sense of direction – Developmental Topographical Disorientation (DTD).
- The more you use GPS, the less you exercise your brain's hippocampus. A healthy hippocampus helps ward off Alzheimer's disease and other brain disorders, so researchers like Véronique Bohbot at McGill think that GPS over-use could possibly lead to early senility.
- Studies show that men, by a slight margin, are better at navigation than women.



PRODUCTION BIOS

SUE RIDOUT **Producer**

Sue is a broadcast journalist, director and producer who spent twenty award-winning years in network news and current affairs at both CTV and CBC Television, before becoming an independent producer and forming Dreamfilm in 2001. Since then she has directed, written and produced documentaries on a wide range of subjects, from intimate biographies to explorations of social, cultural and health issues. Of all the awards on her shelf, the most meaningful is the Gemini Award for Best Biography Documentary for "Peace Warrior," her documentary about Canadian soldier Trevor Greene.

BRUCE MOHUN **Director and Writer**

Bruce Mohun is a science journalist and television director who has produced, directed, hosted and written hundreds of hours of TV. His programs have aired on the CBC, Discovery Channel, TVOntario, Knowledge, Access, and SCN. His most recent documentaries for CBC's "The Nature of Things" have won both the Gold and Silver World Medals at the New York Festivals. His three-hour series on global warming was screened at the New York Film Festival, and the Image and Science Film Festival in Paris. He has been honoured with both the Science Council of British Columbia's Eve Savory Award for Science Communication and the Canadian Federation of Biological Societies Gordin Kaplan Award for Science Communication.



ABOUT DREAMFILM PRODUCTIONS

Dreamfilm Productions is a Gemini Award-winning film production company in Vancouver that specializes in thought-provoking documentaries. Established in 2001 by acclaimed broadcast journalist Sue Ridout, Dreamfilm delivers high-impact documentaries that tackle subject matter with both sensitivity and journalistic integrity. In just over a decade, Dreamfilm has built an impressive roster of 15 award-winning documentaries, including "The Downside of High" (2010), broadcast on CBC's "The Nature of Things" and winner of the prestigious Gold World Medal for Best Health & Medicine documentary at the 2011 New York Festivals; "X-Cars" (2011), a two-hour documentary special for the Discovery Channel, which earned two Gemini nominations; and the Gemini Award winner "Peace Warrior" (Best Biography Documentary, 2009) which followed Canadian soldier Capt. Trevor Greene as he struggled to recover from a devastating brain injury suffered in Afghanistan. Another new Dreamfilm documentary for "The Nature of Things," about allergies, will air in February 2014. Dreamfilm's documentaries have been broadcast in more than 125 countries around the world, and are used extensively as educational tools in colleges and universities. Dreamfilm Productions is based in Vancouver, British Columbia.

For a full roster of productions or more information, please visit www.dreamfilm.ca.



Twitter: @dreamfilm
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PRODUCTION CREDITS

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Special Thanks

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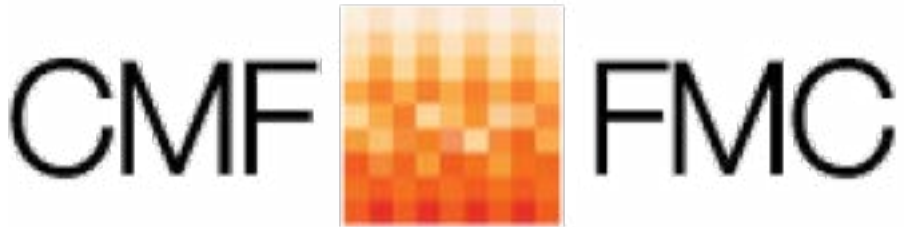
FM MORRISON

PRODUCTION CREDITS con't

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SUE DANDO

Produced with the participation of the



Produced with the participation of the
Province of British Columbia
Film Incentive BC

The Canadian Film or Video Production Tax Credit Program



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CBC

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