SWITCH ON YOUR BRAIN

The Key to Peak Happiness, Thinking, and Health

DR. CAROLINE LEAF



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I see myself as a puzzle builder. And in writing my books, the pieces of the puzzles come together to tell a specific story of hope.

This book is dedicated to:

The ultimate Creator of the puzzles—thank you for honoring me with the task of building a few pieces of the "science of thought" puzzle. I am humbled by this task and will endeavor to bring only you glory through it.

My ever-loving, magnificent love of my life—Mac, my husband. You never seem to tire of listening to me teach on God and the brain with rapt enthusiasm. My sister once said to me that I wouldn't be able to do what I do if it wasn't for you, and this is so true. You are the epitome of loving husbands.

My four outstanding phenomenal children—Jessica, Dominique, Jeffrey, and Alexandria. When I look at you and listen to you, I know I am experiencing God's love and hope and joy. He has blessed me with the epitome of loving children as well.

Our life is what our thoughts make it.

Marcus Aurelius

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Prologue

hat would you do if you found a switch that could turn on your brain and enable you to be happier, healthier in your mind and body, more prosperous, and more intelligent?

In this book you will learn how to find and activate that switch. What you think with your mind changes your brain and body, and you are designed with the power to switch on your brain. Your mind is that switch.

You have an extraordinary ability to determine, achieve, and maintain optimal levels of intelligence, mental health, peace, and happiness, as well as the prevention of disease in your body and mind. You can, through conscious effort, gain control of your thoughts and feelings, and in doing so, you can change the programming and chemistry of your brain.

Science is finally catching up with the Bible, showing us the proof that "God has not given us a spirit of fear, but of power and of love and of a sound mind" (2 Tim. 1:7). Breakthrough neuroscientific research is confirming daily what we instinctively knew all along: What you are thinking every moment of every day becomes a physical reality in your brain and body, which affects your optimal mental and physical health. These thoughts collectively form your attitude, which is your state of mind, and it's *your attitude and not your DNA* that determines much of the quality of your life.

This state of mind is a real, physical, electromagnetic, quantum, and chemical flow in the brain that switches groups of genes on or off in a positive or negative direction based on your choices and subsequent reactions. Scientifically, this is called *epigenetics*; spiritually, this is the enactment of Deuteronomy 30:19, "I have set before you life and death, blessing and cursing; therefore choose life, that both you and your descendants may live." The brain responds to your mind by sending these neurological signals throughout the body, which means that your thoughts and emotions are transformed into physiological and spiritual effects, and then physiological experiences transform into mental and emotional states. It's a profound and eye-opening thought to realize something seemingly immaterial like a belief can take on a physical existence as a positive or negative change in our cells.

And you are in control of all of this. The choices you make today not only impact your spirit, soul, and body, but can also impact the next four generations.

The great news is that we are *wired for love*, which means all our mental circuitry is wired only for the positive, and we have a natural *optimism bias* wired into us. Our default mode is one of being designed to make good choices. So our bad choices and reactions were wired in by our choices, and therefore can be *wired out*. Our brain is neuroplastic—it can change and regrow. In addition, God has built in the operating principle of neurogenesis—new nerve cells are birthed daily for our mental benefit. This sounds like Lamentations

3:22–23, "The LORD's mercies . . . are new every morning." This book shows you how to *get back control* over your thoughts and renew (as in Rom. 12:2) and rewire your brain in the direction you were originally designed to go.

Based solidly on the latest neuroscientific research on the brain, as well as my clinical experience and research, you will learn how thoughts impact your spirit, soul, and body. You will also learn how to detox your thoughts using my practical, detailed, and easy-to-use 21-Day Brain Detox Plan.

The application is for all walks of life. You won't forgive that person, get rid of that anxiety or depression, follow that essential preventative healthcare, strive to that intellectual level you know you are capable of, follow that dream, eat that organic food, do that diet, be that great parent or husband or wife or friend, get that promotion, or make other changes to create a quality, positive lifestyle—unless you first choose to get your mind right and switch on your brain. After all, the ability to think and choose and to use your mind correctly is often the hardest step, but it is the first and most powerful step.

If you realized how powerful your thoughts are, you would never think a negative thought.

Peace Pilgrim

Acknowledgments

y inspiration for building these puzzles and the pieces of the puzzle have come from multiple sources:

The inspiration starts and ends with God, always.

The thousands of scientists whose brilliant work I have devoured and spent many thousands of hours pouring over, astounded at the truths God is revealing through them—many of whom I have mentioned in this book and in my references.

The dedicated, driven, and sometimes very broken patients and clients I have had the privilege of working with over the years. I see their mindful determination to succeed pull them up, often to beyond levels they thought they were capable of.

The wise Bible and science teachers I have sat under (and still sit under).

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Introduction

Switch On Your Brain with Hope

Main Scripture: Faith is the substance of things hoped for, the evidence of things not seen. Hebrews 11:1

Linked Science Concept: Thoughts are real, physical things that occupy mental real estate. Moment by moment, every day, you are changing the structure of your brain through your thinking. When we hope, it is an activity of the mind that changes the structure of our brain in a positive and normal direction.

t was only a few decades ago that scientists—including those who trained me—considered the brain to be a fixed and hardwired machine. This view saw the damaged brain as incurable. They believed brain damage was hopeless and untreatable, whether the effects were from stroke, cardiovascular event, traumatic brain injury, learning disabilities, traumas, PTSD, OCD, depression, anxiety—even aging. All of these causes and conditions were seen as largely irreversible.

Because this was the presiding view of the brain, I was trained back in the '80s to teach my patients *compensation*, not *restoration* of function. I was trained in the conventional wisdom of the time that said brain normality was an impossibility for those with mental limitations or brain damage of any kind. Being a student of the Bible, however, I was deeply familiar with and constantly comforted by Romans 12:2: "Do not conform to the pattern of this world, but be transformed by the renewing of your mind" (NIV). I knew this famous and fabulous "renewing of the mind" passage was a truth I needed to apply to my patients' care to help them overcome their deficits. So my relentless search of this truth as a scientist began.

I was struck by how my patients, using the therapeutic techniques I was developing from my research, belied the negative picture conventional science presented of the human brain at that time. These results confirmed that the brain, far from being fixed in toxicity, can change even in the most challenging neurological situations.

I was in awe of what each patient displayed in terms of what you *can do when you set your mind to it*. Each new scientific study in this direction confirmed what I knew intuitively to be true: We are not victims of our biology or circumstances. How we react to the events and circumstances of life can have an enormous impact on our mental and even physical health.

As we think, we change the physical nature of our brain. As we consciously direct our thinking, we can wire out toxic patterns of thinking and replace them with healthy thoughts. New thought networks grow. We increase our intelligence and bring healing to our brains, minds, and physical bodies.

It all starts in the realm of the mind, with our ability to think and choose—the most powerful thing in the universe after God, and indeed, fashioned after God.

Healthy Memory: Adapted Graphic Sketch



Toxic Memory: Adapted Graphic Sketch



It is with our phenomenal minds that we understand the truths set down in our spirits. It is with our minds that we wire these truths into the brain, which is part of the body. It is with our minds that we choose to develop the spiritual part of who we are and "Therefore put away all filthiness and rampant wickedness and receive with meekness the implanted

word, which is able to save your souls" (James 1:21 ESV). It is with our minds that we reject or believe the lies of the Enemy, the Prince of Lies. It is with our minds that we change the physical reality of the brain to reflect our choices. It is with our minds that we decide to follow God's rules and live in peace despite what is going on around us. It is with our minds that we choose to follow the lies of Satan and spiral into mental, physical, and spiritual disarray.

Thought changes the structure of matter. God said, "Let there be light" (Gen. 1:3), and his words produced the physical earth. And science, which, again, is just catching up with the Word of God, is confirming this reality in a tangible and thought-provoking way with eminently clear accounts arising from the burgeoning field of neuroplasticity research.

Neuroplasticity by definition means the brain is malleable and adaptable, changing moment by moment of every day. Scientists are finally beginning to see the brain as having renewable characteristics (as in Rom. 12:2); it is no longer viewed as a machine that is hardwired early in life, unable to adapt, and wearing out with age. With example after fascinating example, exceptional scientists talk about and demonstrate—using brain-imaging techniques and the evidence of behavioral changes—how people can change their brains with their minds. We can see and measure the activity of the mind through the firing of neurons. We can even predict the seeming elusiveness of the main functions of the mind—that of thinking and choosing—through quantum mechanics.

I continue to find myself moving in a world of engrossing truths, and my spirit leaps inside of me. The fact that the brain is plastic and can actually be changed by the mind gives tangible hope to everyone, no matter what the circumstance. I have been privileged to work with and see:

- autistic children cope in academic and social environments
- senior citizens sharpen their memories to the point that in their eighties they change careers and obtain degrees
- young men and women who grew up in abject poverty and a lifestyle of selling and taking drugs do a complete about-face in their lives, go back to school, and become leaders in their communities
- car accident victims who had been written off by neurologists as "vegetables" retrain their brains to the point that they complete their schooling up to a tertiary level and go on to become successful, contributing citizens
- students labeled as learning disabled with years of therapy and no hope left master learning and achieve grades they and their parents only dreamed of
- schools in some of the worst third-world areas in Africa, in which students could not pass to the next level, become schools on the minister of education's "most improved" list
- children with dyslexia learn to read and write and even help their parents study for exams successfully
- suicidal and emotionally traumatized minds set free
- entire schools improve grades across core subjects

And the list goes on.

Science is hovering on a precipice as we recognize the responsibility and impact of our thinking and the resultant choices we make, which have ramifications right down to the ways in which the genes of our bodies express themselves. Deuteronomy 30:19 is becoming a reality in the world we live in today as we begin to see the effects of choice in the brain and body: "I set before you life and death, blessing

and cursing; choose life so that you and your descendants may live."

How we think not only affects our own spirit, soul, and body but also people around us. Science and Scripture both show how the results of our decisions pass through the sperm and ova to the next four generations, profoundly affecting their choices and lifestyles. The science of epigenetics (the signals, including our thoughts, that affect the activity of our genes) explains how this plays out. This reminds me of the Scripture, "he punishes the children and their children for the sin of the parents to the third and fourth generation" (Exod. 34:7 NIV).

That the brain is plastic and can be changed moment-by-moment by how we direct our thinking—in other words, the choices we make—is a top idea on the bestseller lists, and it actually is the key to switching on our brains. Add to this the fact that every morning when you wake up, new baby nerve cells have been born while you were sleeping that are there at your disposal to be used in tearing down toxic thoughts and rebuilding healthy thoughts. The birth of these new baby nerve cells is called neurogenesis, which brings to mind, "The LORD's mercies . . . are new every morning" (Lam. 3:23).

What a remarkable and hopeful portrait of the endless adaptivity of the human brain God has given us.

This book is divided into two parts, with the overall goal of showing you how to switch on your brain. Part 1 uncovers the keys to doing so. In part 2 you will see how all these keys work together in my 5-Step Switch On Your Brain Learning Process during my 21-Day Brain Detox Plan. Here I will lead you through a process of switching on your brain to achieve peak happiness, thinking, and health.

Here are some of the key points in this book:

- Your mind is the most powerful thing in the universe after God.
- Free will and choice are real, spiritual, and scientific facts (Deut. 30:19).
- Your mind (soul) has one foot in the door of the spirit and one foot in the door of the body; you can change your brain with your mind and essentially renew your mind (Rom. 12:2).
- You can develop your spirit through choices you make in your mind to be led by the Holy Spirit (Gal. 2:20).
- Your body is not in control of your mind—your mind is in control of your body, and your mind is stronger than your body. Mind certainly is *over* matter.
- You are not a victim of your biology.
- You cannot control the events and circumstances of life, but you can control your reaction to those events and circumstances (Matt. 7:13–14; Gal. 6:7–8).
- When you think, you build thoughts, and these become physical substances in your brain. "As he thinks in his heart, so is he" (Prov. 23:7).
- Good thinking = good choices = healthy thoughts; toxic thinking = toxic choices = toxic thoughts (Deut. 30:19).
- You are designed to stand outside yourself and observe your own thinking *and change it* (Rom. 12:2; 2 Cor. 10:5; Phil. 3:13–14).
- You are designed to recognize and choose the right things to think about (Josh. 24:15; Eccles. 7:29; Isa. 30:2).
- Each morning when you wake up, you have new baby nerve cells born inside your brain to use wisely as you

remove bad thoughts and wire in new ones (Lam. 3:23). This is called neurogenesis.

- You have been designed for deep, intellectual thought (Ps. 139:14).
- You are wired for love, and fear is a learned and not a natural response (2 Tim. 1:7).
- You have the mind of Christ (1 Cor. 2:16).
- You are made in God's image (Gen. 1:27).

All this knowledge will help you realize these truths:

- Happiness comes from within and success follows—not the other way around.
- You can learn how to learn and deepen your intellect.
- You can overcome those learning issues.
- You can get the chaos in your mind under control.
- You don't have to walk around in guilt and condemnation.
- If you wired those toxic thoughts in, you can wire them out.
- You don't have to get stuck in bad habits; you can change them.
- You can overcome feelings of rejection and hurt.
- Forgiveness is not the battle you think it is.
- You don't have to worry about things that are out of your control.
- You are not a victim of the things you shouldn't be doing.
- You don't have to fear that if a condition runs in your family that you are going to get it (for example, Alzheimer's, Parkinson's, or depression).

- You can balance your over-thinking and over-analyzing mind.
- You can overcome and control depression and anxiety some scientists are showing you can even control and overcome schizophrenia and OCD.
- You don't have to keep digging into the past to get free from it.
- You can be happy and filled with peace regardless of your circumstances.

If you have nodded your head at even one of these, it is time for you to be set free in your mind to pursue all God has for you. Read on. It is time for you to Switch On Your Brain and find the keys to peak happiness, thinking, and health.

In part 1, I explain through science and Scripture how the concepts described above come together.

In part 2, you will find my 21-Day Brain Detox Plan, which incorporates my scientifically proven 5-Step Switch On Your Brain technique based on my research, my years in clinical practice, and doing seminars and conferences around the world. This section is practical and filled with key, proven strategies that will help you develop a lifestyle of renewing your mind and aligning it with God's will so your divine sense of purpose can be released (Eccles. 3:11).

You are truly designed for peak happiness, thinking, and health.

Introduction Summary

1. It was only a few decades ago that scientists considered the brain to be a fixed and hardwired machine. This

- view saw the damaged brain as incurable and the focus was *compensation*, not restoration of function.
- 2. We can change the physical nature of our brain through our thinking and choosing.
- 3. As we consciously direct our thinking, we can wire out toxic patterns of thinking and replace them with healthy thoughts. New thought networks grow. We increase our intelligence and bring healing to our minds and physical bodies.
- 4. It *all* starts in the realm of the mind, with our ability to think and choose—the most powerful thing in the universe after God.
- 5. Neuroplasticity by definition means the brain is malleable and adaptable, changing moment by moment of every day.
- 6. Scientists are finally beginning to see the brain as having renewable characteristics (as in Rom. 12:2).
- 7. Science is hovering on a precipice as we recognize the responsibility and impact of our thinking and the resultant choices we make, which have ramifications right down to the ways in which the genes of our bodies express themselves.
- 8. Neurogenesis is the birth of new baby nerve cells.

PART 1

How to Switch On Your Brain



Mind Controls Matter

Main Scripture: God has not given us a spirit of fear, but of power and of love and of a sound mind. 2 Timothy 1:7

Linked Science Concept: Science shows we are wired for love with a natural optimism bias. This means exactly what the Scripture says above.

he debate in science is between the mind being what the brain does versus the brain doing the bidding of the mind. The position you adopt will impact how you view free will and choice.

The Mind Is What the Brain Does

The first argument proposes that thoughts come from your brain as though your brain is generating all aspects of your mental experience. People who hold this view are called the *materialists*. They believe that it is the chemicals and neurons

that create the mind and that the relationships between your thoughts and what you do can just be ignored.

So essentially, their perspective is that the brain creates what you are doing and what you are thinking. The mind is what the brain does, they believe, and the ramifications are significant. Take, for example, the treatment of depression. In this reductionist view depression is a chemical imbalance problem of a machinelike brain; therefore, the treatment is to add in the missing chemicals.

This view is biblically and scientifically incorrect.

The Brain Does the Bidding of the Mind

Let's look at this from the other angle of the argument: The brain is what the mind does.

You are a thinking being. You think all day long, and at night as you sleep, you sort out your thinking. As you think, you choose, and as you choose, you cause genetic expression to happen in your brain. This means you make proteins, and these proteins form your thoughts. Thoughts are real, physical things that occupy mental real estate.

Eric R. Kandel, a Nobel Prize—winning neuropsychiatrist for his work on memory, shows how our thoughts, even our imaginations, get "under the skin" of our DNA and can turn certain genes on and certain genes off, changing the structure of the neurons in the brain.¹ So as we think and imagine, we change the structure and function of our brains. Even Freud speculated back in the 1800s that thought leads to changes in the brain.² In recent years, leading neuroscientists like Marion Diamond, Norman Doidge, Joe Dispenza, Jeffrey Schwartz, Henry Markram, Bruce Lipton, and Allan Jones, to name just a few, have shown how our thoughts have remarkable

power to change the brain.³ Our brain is changing moment by moment as we are thinking. By our thinking and choosing, we are redesigning the landscape of our brain.

Our mind is designed to control the body, of which the brain is a part, not the other way around. Matter does not control us; we control matter through our thinking and choosing. We cannot control the events and circumstances of life but we can control our reactions. In fact, we can control our reactions to anything, and in doing so, we change our brains. It's not easy; it is hard work, but it can be done through our thoughts and choices. This is what I focus on in the second half of the book with my 21-Day Brain Detox Plan.

For now, rest in the assurance that what God has empowered you to do with your mind is more powerful and effective than any medication, any threat, any sickness, or any neurological challenge. The Scripture is clear on this: You do not have a spirit of fear but of love, power, and a sound mind (2 Tim. 1:7). We are not bound by the physical; we control the physical. You just have to look at the many inspirational survival stories of those who have overcome impossible odds throughout history and in the current day to know this is truth.

Choices Are Real

You are free to make choices about how you focus your attention, and this affects how the chemicals and proteins and wiring of your brain change and function. Scientists are proving that the relationship between what you think and how you understand yourself—your beliefs, dreams, hopes, and thoughts—has a huge impact on how your brain works.

Research shows that 75 to 98 percent of mental, physical, and behavioral illness comes from one's thought life.⁴

This staggering and eye-opening statistic means only 2 to 25 percent of mental and physical illnesses come from the environment and genes.

Thinking Activates Genes

Every day scientists are discovering the precise pathways by which changes in human consciousness produce changes in our brain and bodies. Our consciousness—this phenomenal gift from God to be able to think—activates our genes and changes our brain. Science shows that our thoughts, with their embedded feelings, turn sets of genes on and off in complex relationships. We take facts, experiences, and the events of life, and assign meaning to them with our thinking.

We may have a fixed set of genes in our chromosomes, but which of those genes are active and *how* they are active has a great deal to do with how we think and process our experiences. Our thoughts produce words and behaviors, which in turn stimulate more thinking and choices that build more thoughts in an endless cycle.

Our Brains Are Shaped by Our Reactions

We are constantly reacting to circumstances and events, and as this cycle goes on, our brains become shaped by the process in either a positive, good-quality-of-life direction or a negative, toxic, poor-quality-of-life direction. So it is the quality of our thinking and choices (consciousness) and our reactions that determine our "brain architecture"—the shape or design of the brain and *resultant* quality of the health of our minds and bodies.

Science and Scripture both show that we are wired for love and optimism⁵ and so when we react by thinking negatively

and making negative choices, the quality of our thinking suffers, which means the quality of our brain architecture suffers. It is comforting—and challenging—to know that negative thinking is not the norm.

Thinking Changes Our DNA

Taking this to a deeper level, research shows that *DNA actually changes shape according to our thoughts*. As you think those negative thoughts about the future—the week ahead, what a person might say or do, even in the absence of the concrete stimulus—that toxic thinking will change your brain wiring in a negative direction and throw your mind and body into stress.⁶

According to Dr. Herbert Benson, MD, president of Harvard Medical School's Mind-Body Institute, negative thinking leads to stress, which affects our body's natural healing capacities.⁷

Toxic thinking wears down the brain.

The Institute of HeartMath, an internationally recognized, nonprofit research organization that helps people reduce stress, discusses an experiment titled "Local and Nonlocal Effects of Coherent Heart Frequencies on Conformational Changes of DNA." This study showed that thinking and feeling anger, fear, and frustration caused DNA to change shape according to thoughts and feelings. The DNA responded by tightening up and becoming shorter, switching off many DNA codes, which reduced quality expression. So we feel shut down by negative emotions, and our body feels this too. But here's the great part: the negative shutdown or poor quality of the DNA codes was *reversed* by feelings of love, joy, appreciation, and gratitude! The researchers also found that HIV positive patients who had positive thoughts and feelings had 300,000 times more resistance to the disease than those

without positive feelings.⁸ So the takeaway here is that when we operate in our normal love design—which is being made in God's image (Gen. 1:26)—we are able to change the shape of our DNA for the better.

So when we make a poor-quality decision—when we choose to engage toxic thoughts (for example, unforgiveness, bitterness, irritation, or feelings of not coping)—we change the DNA and subsequent genetic expression, which then changes the shape of our brain wiring in a negative direction. This immediately puts the brain into protection mode, and the brain translates these poor-quality, toxic thoughts as negative stress. This stress then manifests in our bodies. But the most exciting part of this study was the hope it demonstrated because the positive attitude, the good choice, rewired everything back to the original healthy positive state. These scientists basically proved we can renew our minds.

Stress

Stress stage one is normal. This is our alert state that keeps us focused and conscious and is the state we are in when we are thinking in alignment with God. Stress stage two and stage three, however, are our mind and body's response to toxic thinking—normal stress gone wrong. Even a little bit of these negative levels of stress from a little bit of toxic thinking has far-reaching consequences for mental and physical health.

The dictionary defines *stress* as "a condition typically characterized by symptoms of mental and physical tension or strain, as depression or hypertension, that can result from a *reaction* to a situation in which a person feels threatened, pressured, etc." Synonyms for stress include anxiety, nervousness, fearfulness, apprehensiveness, impatience, fear, tenseness, and restlessness.

Reaction is the key word here. You cannot control the events or circumstances of your life, but you can control your reactions. And controlling those reactions is the difference between healthy minds and bodies and sick minds and bodies.

Here are just a few statistics confirming that 75 to 98 percent of mental and physical illness comes from one's thought life:

- A study by the American Medical Association found that stress is a factor in 75 percent of all illnesses and diseases that people suffer from today.¹⁰
- The association between stress and disease is a colossal 85 percent.¹¹
- The International Agency for Research on Cancer and the World Health Organization¹² have concluded that 80 percent of cancers are due to lifestyle and not genetics, and this is a conservative number.
- According to Dr. Bruce Lipton, a scientist who has made great strides in understanding the effect of our thinking on our brain, ¹³ gene disorders like Huntington's chorea, beta thalassemia, and cystic fibrosis, to name a few, affect less than 2 percent of the population. This means the vast majority of the world's population comes into this world with genes that should enable them to live happy and healthy lives. Lipton says a staggering 98 percent of diseases are related to lifestyle choices—in other words, our thinking.
- According to Dr. H. F. Nijhout,¹⁴ genes control biology and not the other way around.
- According to W. C. Willett,¹⁵ only 5 percent of cancer and cardiovascular patients can attribute their disease to hereditary factors.
- The American Institute of Health estimates that 75–90 percent of all visits to primary care physicians are for

stress-related problems. 16 Some of the latest negative stress statistics causing illness as a result of toxic thinking are eye-opening.

The main point of this chapter is that mind controls matter. If we get this right, we have enormous potential to reach peak health. If we get it wrong, we will be our own worst enemies.

Chapter 1 Summary

- 1. The debate in science is between the mind being what the brain does versus the brain doing the bidding of the mind.
- 2. The correct view is that the mind is designed to control the body, of which the brain is a part, not the other way around.
- 3. Our brain does not control us; we control our brain through our thinking and choosing.
- 4. We can control our reactions to anything.
- 5. Choices are real. You are free to make choices about how you focus your attention, and this affects how the chemicals, proteins, and wiring of your brain change and function.
- 6. Research shows that DNA actually changes shape in response to our thoughts.
- 7. Stress stage one is normal. Stress stage two and stage three, on the other hand, are our mind and body's response to toxic thinking—basically normal stress gone wrong.
- 8. *Reaction* is the key word here. You cannot control the events or circumstances of your life, but you can control your reactions.