

Philosophy Ripped From The Headlines!



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Compiled & Edited by *Philosophy Without Borders*

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1. “Drawing a Line in the ‘Gay Wedding Cake’ Case”

By John Corvino

The New York Times, 27 NOVEMBER 2017

URL = <https://www.nytimes.com/2017/11/27/opinion/gay-wedding-cake.html>



Credit Sara Krulwich/The New York Times

At first glance, the Masterpiece Cakeshop case — for which the United States Supreme Court will hear arguments on Dec. 5 — looks easy. In 2012 Charlie Craig and David Mullins attempted to buy a wedding cake at Masterpiece Cakeshop in Lakewood, Colo. The owner, an evangelical Christian named Jack Phillips, refused to sell them one. The Colorado Civil Rights Commission found Phillips liable for sexual-orientation discrimination, which is prohibited by the state’s public accommodations law. State courts have upheld the commission’s decision.

The reason the nation’s high court is giving the case a second glance is Phillips’s First Amendment claim that he was not, in fact, discriminating on the basis of sexual orientation, but on the basis of a particular message: endorsement of same-sex marriage. Phillips made it clear to the gay couple that he would happily sell them other items: birthday cakes, cookies, and so on.

He welcomes LGBT customers; he is simply unwilling to use his artistic talents in the service of a message that he deems immoral.

One might better appreciate Phillips's position by considering a second case. In 2014, not long after the commission announced its Masterpiece decision, William Jack attempted to buy a cake at Azucar Bakery in Denver, Colo. Specifically, he requested a Bible-shaped cake decorated with an image of two grooms covered by a red X, plus the words "God hates sin. Psalm 45:7" and "Homosexuality is a detestable sin. Leviticus 18:22." The owner, Marjorie Silva, refused to create such an image or message, which conflicts with her moral beliefs. She did, however, offer to sell him a Bible-shaped cake and provide an icing bag so that he could decorate it as he saw fit. The customer filed a complaint alleging religious discrimination, which is also prohibited by Colorado's public accommodations law. But the commission disagreed, arguing that Silva's refusal was based not on the customer's religion, but on the cake's particular message.

Jack Phillips's supporters have been crying foul since. If the First Amendment protects Marjorie Silva's right not to condemn same-sex relationships, they argue, then it protects Jack Phillips's right not to celebrate them. But there is a key difference between the cases, and the difference points to a useful line-drawing principle.

Put aside the plausible objection that treating cakes as speech — especially cakes without writing, as in the Masterpiece case — abuses the First Amendment. And put aside the even more plausible objection that whatever "speech" is involved is clearly that of the customers, not of the baker: As law professors Dale Carpenter and Eugene Volokh explain in a Masterpiece brief, "No one looks at a wedding cake and reflects, 'the baker has blessed this union.'" After all, that objection is arguably just as applicable to the Bible-cake case.

Finally, put aside the objection that "It's just cake!" That could be said to any of the parties in these disputes, and it doesn't alter the deeper rationale for anti-discrimination laws, which are about ensuring equal access in the public sphere — not just for cakes, flowers, and frills, but for a wide range of vital goods and services.

It is tempting to describe Marjorie Silva's Bible-cake refusal as the moral mirror-image of Jack Phillips's wedding-cake refusal: Neither baker was willing to assist in conveying a message to which they were morally opposed.

But that's not quite right. For recall that Silva was willing to sell the customer a Bible-shaped cake and even to provide an icing bag, knowing full well what the customer intended to write. She was willing to sell this customer the very same items that she would sell to any other customer; what he did with them after leaving her store was, quite literally, none of her business.

Therein lies the crucial difference between the cases: Silva's objection was about what she sold; a design-based objection. Phillips's objection was about to whom it was sold; a user-based objection. The gay couple never even had the opportunity to discuss designs with Phillips, because the baker made it immediately clear that he would not sell them any wedding cake at all. Indeed, Masterpiece once even refused a cupcake order to lesbians upon learning that they were for the couple's commitment ceremony.

Business owners generally have wide discretion over what they do and do not sell: A vegan bakery needn't sell real buttercream cakes. A kosher bakery needn't sell cakes topped with candied bacon, or in the shape of crosses. By contrast, business owners generally do not have discretion over how their products are later used: A kosher bakery may not refuse to sell bread to non-Jews, who might use it for ham-and-cheese sandwiches.

(Of course, there are times when the buyer's identity or the intended use is legally relevant. It is permitted — indeed, required — to refuse alcohol to minors, or torches to someone who announces that he is about to commit arson. But that legal concern does not apply here.)

In his defense, Phillips has pointed out that he refuses to sell Halloween cakes or demon-themed cakes; he analogizes these refusals to his unwillingness to sell gay wedding cakes. In other words, he maintains that his turning away the gay couple was about what was requested, not who was requesting it.

The problem with this retort is that “gay wedding cakes” are not a thing. Same-sex couples order their cakes from the same catalogs as everyone else, with the same options for size, shape, icing, filling, and so on. Although Phillips's cakes are undeniably quite artistic, he did not reject a particular design option, such as a topper with two grooms — in which case, his First Amendment argument would be more compelling. Instead, he flatly told Craig and Mullins that he would not sell them a wedding cake.

Imagine a fabric shop owner who makes artistic silk-screened fabrics. It would be one thing if she declined to create a particular pattern, perhaps because she found it obscene. It would be quite another if she offered that pattern to some customers, but wouldn't sell it to Muslims who intend it for hijabs. The Bible-cake case is like the first, design-based refusal; the Masterpiece case is like the second, user-based one.

Or imagine a winemaker. It would be one thing if she declined to produce a special blend. It would be another if she offered that blend, but refused to sell it to Catholic priests who intended it for sacramental use. The latter would run afoul of Colorado's public accommodations law, which prohibits religious discrimination.

But wait: Isn't there a difference between discrimination that's user-based and discrimination that's use-based? The winemaker in our example is not refusing to sell wine to Catholics, or even to priests; she is merely refusing to sell the wine for a particular purpose. Same with the fabric-store owner, who might happily sell to Muslims making curtains. In a similar vein, Jack Phillips is explicitly willing to sell LGBT people a wide range of baked goods, as long as they are not to be used for same-sex weddings.

This kind of sophistry has been rejected by the Court before. As the late Justice Scalia once wrote, “A tax on wearing yarmulkes is a tax on Jews.” Some activities are so fundamental to certain identities that discrimination according to one is effectively discrimination according to the other. That's certainly true of wearing hijabs and religion, or celebrating mass and religion; likewise of same-sex weddings and sexual orientation. In such cases, use-based discrimination and user-based discrimination amount to the same thing.

But couldn't one argue in the Bible-cake case that a commitment to a traditional Biblical understanding of sexuality is similarly fundamental to William Jack's identity? Of course. But it doesn't follow that Marjorie Silva, the baker in that case, must alter what she sells in order to help him express that identity. While Jack Phillips, the Masterpiece baker, is akin to the winemaker who won't sell wine for mass, Silva is more like one who sells wine to all customers, but declines to put crosses on the labels. Again, her refusal is design-based, not identity-based or use-based. Unlike Phillips, she is willing to sell this customer the same items she sells to any other customer.

We've seen Jack Phillips's First Amendment argument before. Back in 1964, when Maurice Bessinger of Piggie Park BBQ fought public accommodations laws that required him to serve black customers equally, he invoked his rights to freedom of speech and freedom of religion. Bessinger noted that he was happy to sell black customers takeout food; he simply did not want to be complicit in what he saw as the evil of integrated dining. The Supreme Court unanimously rejected this argument.

The details of the current cases are different, as is the social context. As I've argued before at the Stone [**see the link on p. 10 below**], it's a mistake to treat sexual-orientation discrimination as exactly like racial discrimination — just as it's a mistake to treat it as entirely dissimilar. But the underlying principle from Piggie Park holds in the case at hand: Freedom of speech and freedom of religion do not exempt business owners from public accommodations laws, which require them to serve customers equally. The Court should uphold the commission's decision and rule against Phillips.

2. “A Baker’s First Amendment Rights”

By ROBERT P. GEORGE and SHERIF GIRGIS

The New York Times, 4 DECEMBER 2017

URL = <https://www.nytimes.com/2017/12/04/opinion/first-amendment-wedding-cake.html>



Jack Phillips is the proprietor of Masterpiece Cakeshop, where he makes elaborate wedding cakes and other baked goods. Credit Matthew Staver for The New York Times

You need the First Amendment precisely when your ideas offend others or flout the majority’s orthodoxies. And then it protects more than your freedom to speak your mind; it guards your freedom not to speak the mind of another.

Thus, in classic “compelled speech” rulings, the Supreme Court has protected the right not to be forced to say, do or create anything expressing a message one rejects. Most famously, in *West Virginia v. Barnette* (1943), it barred a state from denying Jehovah’s Witnesses the right to attend public schools if they refused to salute the flag. In *Wooley v. Maynard* (1977), the court prevented New Hampshire from denying people the right to drive if they refused to display on license plates the state’s libertarian-flavored motto “live free or die.”

On Tuesday, the court will consider whether Colorado may deny Jack Phillips, the owner of Masterpiece Cakeshop, the right to sell custom wedding cakes because he cannot in conscience

create them for same-sex weddings. Mr. Phillips, who has run his bakery since 1993, sells off-the-shelf items to anyone, no questions asked. But he cannot deploy his artistic skills to create cakes celebrating themes that violate his religious and moral convictions. Thus he does not design cakes for divorce parties, lewd bachelor parties, Halloween parties or same-sex weddings.

Colorado's order that he create same-sex wedding cakes (or quit making any cakes at all) would force him to create expressive products carrying a message he rejects. That's unconstitutional.

Some fear a slippery slope, arguing that anything can be expressive. What if someone refused to rent out folding chairs for the reception? Or what about restaurant owners who exclude blacks because they think God wills segregation? If we exempt Mr. Phillips, won't we have to exempt these people from anti-discrimination law?

Our point is not that forcing people to sell a product or service for an event always compels them to endorse the event. It's that forcing them to create speech celebrating the event does. And it's well-established that First Amendment "speech" includes creative work ("artistic speech") ranging from paintings to video games.

Unlike folding chairs or restaurant service, custom wedding cakes are full-fledged speech under the First Amendment. Creating them cannot be conveniently classified as "conduct, not expression" to rationalize state coercion.

After all, the aesthetic purpose of wedding cakes — combined with the range and complexity of their possible designs — makes them just as capable of bearing expressive content as other artistic speech. Mr. Phillips's cakes are admired precisely for their aesthetic qualities, which reflect his ideas and sensibilities. A plaster sculpture of the same size and look would without question be protected. That wedding cakes are edible is utterly beside the point. Their main purpose isn't to sate hunger or even please the palate; it is aesthetic and expressive. They figure at receptions as a centerpiece and then part of the live program, much like a prop in a play. And no one denies that forcing artists to design props for plays promoting a state-imposed message would be unconstitutional.

If wedding cakes are expressive, whether by words or mere festive design, what's their message? We can tell by their context since, as the court notes, a symbolic item's context "may give meaning to the symbol." Thus, the court found that an upside-down flag with a peace sign carried an antiwar message — protected as speech — because of the context of its display. Likewise, a wedding cake's context specifies its message: This couple has formed a marriage. When the specific context is a same-sex wedding, that message is one Mr. Phillips doesn't believe and cannot in conscience affirm. So coercing him to create a cake for the occasion is compelled artistic speech.

Note that this argument wouldn't cover *all* requirements to make artistic items. The law may force photographers to do photo portraits for Latinos as well as whites since that doesn't yet force them to create art bearing an idea they reject, which is all the compelled-speech doctrine forbids. But custom wedding cakes carry a message specific to each wedding: This is a marriage.

Can Colorado justify its compulsion anyway? Some say yes: Fighting discrimination — disfavored conduct, not speech — is the general goal of Colorado’s public-accommodations law. And if that goal is legitimate, they continue, so is every application of this law.

Remarkably, given how commonly one encounters this answer, the court has explicitly considered and rejected it twice. In *Hurley v. Irish-American Gay, Lesbian, and Bisexual Group of Boston* (1995), the court held that while anti-discrimination laws do not “as a general matter” violate the First Amendment, they do when “applied in a peculiar way” that burdens speech. In that case and in *Boy Scouts of America v. Dale* (2000), the government said there was sexual-orientation discrimination, both times under its public-accommodations laws. The goal in both was to fight discrimination rooted in opposition to “homosexual conduct.” Still, the court said both times, this generic goal could not justify coercion that interfered with the content of anyone’s expression.

In these cases, after all, the precise act being targeted just is the speaker’s choosing (“discriminating”) among which ideas to express — exactly what the First Amendment exists to protect. As the court put it in *Hurley*, the “point of all speech protection” is “to shield just those *choices of content* that in someone’s eyes are misguided, or even hurtful.”

So to use the force of law to compel Mr. Phillips to create same-sex wedding cakes, Colorado must identify another goal. Is it to ensure that all couples have access to a cake? But they do: Colorado hasn’t even suggested otherwise. Choices like Mr. Phillips’s amount to a “handful in a country of 300 million people,” according to Andrew Koppelman, a constitutional scholar and gay-rights advocate.

The only claim left is that Mr. Phillips’s expressive choice causes what some refer to as dignitary harm: the distress of confronting ideas one finds demeaning or hurtful. Yet accepting that justification would shatter what the court in *Texas v. Johnson* (1989) called a “bedrock principle” — namely that “the government may not prohibit the expression of an idea simply because society finds the idea itself offensive.”

At some level, Colorado itself gets it. Three times the state has declined to force pro-gay bakers to provide a Christian patron with a cake they could not in conscience create given their own convictions on sexuality and marriage. Colorado was right to recognize their First Amendment right against compelled speech. It’s wrong to deny Jack Phillips that same right.

THREE Follow-Ups:

1. What is the concept of *freedom of expression or speech*, whether as a moral concept or as a legal concept specifically in the USA?
2. What is the concept of *freedom to provide goods and services for the general public?*, whether as a moral concept or as a legal concept specifically in the USA?
3. Is the following argument sound? If so, why? If not, why not?

1. There are several important moral and legal differences between (i) the concept of *freedom of expression or speech*, and (ii) the concept of *freedom to provide goods and services for the general public*.

2. In particular, although it is rationally unjustified, immoral, and also illegal in the USA to force someone to express themselves or speak in a certain way, nevertheless, if someone has freely chosen to provide certain goods and services to the general public, then it is also rationally unjustified, immoral, and also illegal in the USA for *the provider* of those goods or services to discriminate between *consumers* or *users* of those goods or services on the basis of race, gender, religious belief, sexual orientation, etc., alone.

3. Therefore, even though it would be rationally unjustified, immoral, and illegal for anyone to force Jack Phillips *to endorse gay marriage by means of any form of free expression or speech*, nevertheless, since, as a commercial baker and cake-maker, he has freely chosen to make wedding cakes and sell them to his customers, it is rationally unjustified, immoral, and illegal for him *to refuse to sell wedding cakes to gay couples*.

4. Therefore, since Phillips believes that homosexuality and gay marriage are bad and wrong, then he should have *sold the gay couple a wedding cake* while at the same time *declining to decorate it for them*.

ONE Link:

“Gay Rights and the Race Analogy”:

<https://opinionator.blogs.nytimes.com/2015/08/22/gay-rights-and-the-race-analogy/>

3. “In Dark Times, ‘Dirty Hands’ Can Still Do Good”

By John Kaag and Clancy Martin

The New York Times, 4 December 2017



Credit Richard Kalvar/Magnum Photos

Meet Helen, a middle-aged woman newly devoted to Tibetan Buddhism, living in the American Midwest. She has recently taken a vow to limit and alleviate suffering in the world. She thinks one way to do this is to make a pilgrimage to Taksang Monastery, or the Tiger Nest, in the mountains of Bhutan, to receive rare and precious teachings that will spiritually prepare her for her life of compassionate action. According to legend, the eighth-century Buddhist master Guru Rinpoche flew to this location from Tibet on the back of a tigress, but Helen takes a 737 from Kansas City, Mo.

The fossil fuels burned on this trip damage the natural environment; the food that Helen eats on the plane is prepared by underpaid workers and supports industrial agriculture; the clothes she wears and the seats she sits on were made in sweatshops; the airline itself is part of an enormous multinational conglomerate.

You get the point: Even what we see as our most high-minded and noble journeys can perpetuate the destructive forces that we hope to escape. In the words of the American Transcendentalist,

Ralph Waldo Emerson, “My giant goes with me wherever I go.” Helen’s actions, though well-intentioned, hover between hypocrisy and self-defeat.

But perhaps we shouldn’t be so quick to judge Helen. We live in an age of deep [complicity](#) — and not just the political sort. The world’s most pressing problems are global — poverty, hunger, environmental decimation and warming — and implicate us all. To a greater or lesser extent, and often with the best intentions, we have done our part in contributing to the mess.

Seen this way, then, Helen’s complicity is not necessarily her fault. Helen did not create the circumstances in which she finds herself: it is impractical, next to impossible and probably undesirable, for Helen to find another way to Bhutan and her Buddhist goals. If she is to be a Buddhist in any sense, however, she must find a way to work through the complicity that remains the fact of the matter.

This is not unlike what Western ethicists call the “[problem of dirty hands](#)”: the difficulty of tidying up the world’s atrocities with hands that can never be washed clean, and may get dirtier in the process. “You can’t fix the system from the outside ...” is how this kind of complicity is normally sold to someone who is being drawn into what C. S. Lewis derided as “The Inner Ring,” the place of morally inappropriate compromise.

What should we make, then, of this situation that many of us find ourselves in today, perhaps especially we Americans. What is a person to do when she is at least partly responsible for the evils she would like to escape, reduce or remedy? What of our desire to do good in the world is tainted by our own harmful actions? Is it possible to act morally or maintain spiritual traditions in a broken world?

These are not, of course, new questions. And certainly not new to Buddhist practitioners. They were of great concern in particular to the 13th-century Japanese master, Shinran, the founder of the Jodo Shinshu sect. Master Shinran believed he lived in what is known in Buddhist cosmology as the Age of Dharma Decline, a period, not unlike our own, when traditional forms of spiritual cultivation were on the brink of collapse. Shinran is famous for suggesting that the way to respond to “dirty” times — of social and spiritual dissolution and decay — is to cultivate a path to the Pure Land, a simple pristine faith in Amitabha Buddha.

While the object of faith may be pristine, however, Shinran taught that the way to the Pure Land wasn’t, and still isn’t, pure at all. On his account, we can both be complicit and hold ourselves responsible for trying to make a difference. This is a lesson particularly suited to degenerate times. Pure Land Buddhism does not want us to give up our moral lives, but to give up the pretensions that often accompany them. It believes in very modest forms of moral improvement, eked out over the life of individuals and their communities, especially when they are largely flawed.

Shin Buddhism responded very directly to the problem of inevitable and thoroughgoing complicity. Unlike the more traditional Buddhists Dogen and Honen — two closely related teachers — Shinran was never able to shake the sense that he was, from the start, unable to fulfill the duties and ideals of monastic life; he was simply too botched. In the past, salvation might

have been achieved by good works or karmic progress, but, according to the Buddhist cosmology to which Shinran adhered, this time was long gone. It is precisely where he failed, however, that he succeeded as a teacher. The pain of self-understanding (that he wasn't suited for the priesthood) passed seamlessly into self-critique, and, ultimately, into a form of confession that remains unique in Buddhist teaching today. His suggestion is clear: Salvation may turn on pure faith, but sincere faith turns on the constant acknowledgment of unavoidable imperfection.

Shinran writes: "Each of us in outward bearing makes a show of being wise, good, and dedicated. But so great are our greed, anger, perversity and conceit that we are filled with all forms of malice and cunning." This is the sort of admission that many spiritual seekers (and, for that matter, angry, self-righteous moralists or politicians) don't want to hear. It suggests that there is no transcendent escape, that, in Shinran's words "hell is my permanent abode, my house." To be clear, this admission is not spoken from a place of despair or a certain type of quietism; it is, instead, a brave realism about the human condition that is cleareyed about the realities of moral and spiritual development.

Alexis Shotwell, a Canadian sociologist and philosopher whose recent book "[Against Purity](#)" resonates with strains of Jodo Shinshu, writes that "what's needed, instead of a pretense to purity that is impossible in the actually existing world, is something else. We need to shape better practices of responsibility and memory for our placement in relation to the past, our implication in the present and our potential creation of different futures." Aiming for individual purity, Shotwell says, echoing the ancient sage, is counterproductive. When we do, he argues, we become solipsistic, narcissistic and self-focused.

When one bathes, or meditates, or hikes, or works out, or eats — one typically does so, at least in the West, by oneself. It is *my* naturally harvested luffa sponge, *my* thoughts to control and *my* mind to clear, *my* \$300 Alpine boots, *my* home gym, *my* cucumber on sprouted bread sandwich, *my* quest for perfection. And decidedly not yours. Part of the problem, Shinran believes, is that each of us actually think we know the way to purity and enlightenment. Each of us thinks we can get there by ourselves. He is quite clear on this point: we don't have a clue how to achieve salvation. "I know nothing at all of good and evil," Shinran admits, "... with a foolish being full of blind passions — in this burning house — all matters without exception are empty and false."

This is what Western philosophers term "epistemic humility" — a deep Socratic sense that one knows that he or she doesn't know. For Shinran, this is a pivotal form of spiritual prostration — a laying low of the last vestiges of selfhood. Everything in human existence is equally meaningful or meaningless, take your pick.

In being "against purity" — in knowing "nothing at all about good and evil" — Shinran also stood against the standard way that most Buddhists of his day understood themselves and enlightenment. He was neither a monk, nor a layperson, and didn't fit in anywhere. Traditional teachers called him a fool or a heretic, and upon being exiled to the remote province of Echigo, Shinran embraced his outsider status, assuming the name Gutoku — "the stubble-faced idiot." There are stubble-faced idiots who don't know they are stubble-face idiots, and there are those who do. These idiots — the one's with self-knowledge, like Shinran — might be better equipped to mitigate the effects of their idiocy.

Some Buddhists worry that Pure Land Buddhism takes the dharma too far in the direction of resignation away from the world in favor of faith. But resignation has its virtues. It means that you might have the chance to get over yourself and consider the power and vulnerability of something else. Resignation is not regarded as a virtue in our society, but perhaps it should be. Perhaps knowing when to let go, when to relinquish control, when to free ourselves from the habits of thought that so often constrain us — maybe this is true prudence, what many ancient sages regarded as the virtue of virtues.

There is no habit of thought that is as pervasive as the aspiration to purity and perfection, but we suspect, along with Shotwell and Shinran, that it is almost always self-defeating. It comes as no surprise that the greatest champions of purity and perfection among us are revealed as the most flagrant hypocrites. Until we confront our complicity, we can never improve ourselves or the moral and spiritual circumstances we inhabit and help to create. It is high time to make our home in the “impure land.” After all, it is where most of us already live.

ONE Follow-Up:

Is the following argument sound? If so, why? If not, why not?

1. The aspiration to purity and perfection is almost always self-defeating.
2. We are all, by our very nature as human persons, and also by our actual natural and social actual circumstances, not only finite in extent and power, but also flawed in countless many ways.
3. Therefore, we should never actively strive to be significantly better than we already are.

ONE Link:

“Ethics in Indian and Tibetan Buddhism”: <https://plato.stanford.edu/entries/ethics-indian-buddhism/>

4. “The Minds of Plants”

By Laura Ruggles

Aeon, 12 DECEMBER 2017

URL = <https://aeon.co/essays/beyond-the-animal-brain-plants-have-cognitive-capacities-too>

At first glance, the Cornish mallow (*Lavatera cretica*) is little more than an unprepossessing weed. It has pinkish flowers and broad, flat leaves that track sunlight throughout the day. However, it's what the mallow does at night that has propelled this humble plant into the scientific spotlight. Hours before the dawn, it springs into action, turning its leaves to face the anticipated direction of the sunrise. The mallow seems to remember where and when the Sun has come up on previous days, and acts to make sure it can gather as much light energy as possible each morning. When scientists try to confuse mallows in their laboratories by swapping the location of the light source, the plants simply learn the new orientation.

What does it even mean to say that a mallow can learn and remember the location of the sunrise? The idea that plants can behave intelligently, let alone learn or form memories, was a fringe notion until quite recently. Memories are thought to be so fundamentally cognitive that some theorists [argue](#) that they're a necessary and sufficient [marker](#) of whether an organism can do the most basic kinds of thinking. Surely memory requires a brain, and plants lack even the rudimentary nervous systems of bugs and worms.

However, over the past decade or so this view has been forcefully challenged. The mallow isn't an anomaly. Plants are not simply organic, passive automata. We now know that they can sense and integrate information about dozens of different environmental variables, and that they use this knowledge to guide flexible, adaptive behaviour.

For example, plants can [recognise](#) whether nearby plants are kin or unrelated, and adjust their foraging strategies accordingly. The flower *Impatiens pallida*, also known as pale jewelweed, is one of several species that tends to devote a greater share of resources to growing leaves rather than roots when put with strangers – a tactic apparently geared towards competing for sunlight, an imperative that is diminished when you are growing next to your siblings. Plants also mount complex, targeted [defences](#) in response to recognising [specific predators](#). The small, flowering *Arabidopsis thaliana*, also known as thale or mouse-ear cress, can detect the vibrations caused by caterpillars munching on it and so release oils and chemicals to repel the insects.

Plants also communicate with one another and [other organisms](#), such as parasites and microbes, using a variety of [channels](#) – including ‘mycorrhizal networks’ of fungus that link up the root systems of multiple plants, like some kind of subterranean internet. Perhaps it's not really so surprising, then, that plants learn and use memories for prediction and decision-making.

What does learning and memory involve for a plant? An example that's front and centre of the debate is *vernalisation*, a process in which certain plants must be exposed to the cold before they can flower in the spring. The ‘memory of winter’ is what helps plants to distinguish between

spring (when pollinators, such as bees, are busy) and autumn (when they are not, and when the decision to flower at the wrong time of year could be reproductively disastrous).

In the biologists' favourite experimental plant, *A thaliana*, a gene called FLC produces a chemical that stops its little white blooms from opening. However, when the plant is exposed to a long winter, the by-products of other genes measure the length of time it has been cold, and close down or repress the FLC in an increasing number of cells as the cold persists. When spring comes and the days start to lengthen, the plant, primed by the cold to have low FLC, can now flower. But to be effective, the anti-FLC mechanism needs an extended chilly spell, rather than shorter periods of fluctuating temperatures.

This involves what's called *epigenetic memory*. Even after vernalised plants are returned to warm conditions, FLC is kept low via the remodelling of what are called chromatin marks. These are proteins and small chemical groups that attach to DNA within cells and influence gene activity. Chromatin remodelling can even be transmitted to subsequent generations of divided cells, such that these later produced cells 'remember' past winters. If the cold period has been long enough, plants with some cells that never went through a cold period can still flower in spring, because the chromatin modification continues to inhibit the action of FLC.

But is this really memory? Plant scientists who study 'epigenetic memory' will be the first to admit that it's fundamentally different from the sort of thing studied by cognitive scientists. Is this use of language just metaphorical shorthand, bridging the gap between the familiar world of memory and the unfamiliar domain of epigenetics? Or do the similarities between cellular changes and organism-level memories reveal something deeper about what memory really is?

Both epigenetic and 'brainy' memories have one thing in common: a persistent change in the behaviour or state of a system, caused by an environmental stimulus that's no longer present. Yet this description seems too broad, since it would also capture processes such as tissue damage, wounding or metabolic changes. Perhaps the interesting question isn't really whether or not memories are needed for cognition, but rather which types of memories indicate the existence of underlying cognitive processes, and whether these processes exist in plants. In other words, rather than looking at 'memory' itself, it might be better to examine the more foundational question of how memories are acquired, formed or learned.

When the plant was dropped from a height, it learned that this was harmless and didn't demand a folding response

'The plants remember,' said the behavioural ecologist Monica Gagliano in a recent [radio interview](#), 'they know exactly what's going on.' Gagliano is a researcher at the University of Western Australia, who studies plants by applying behavioural learning techniques developed for animals. She reasons that if plants can produce the results that lead us to believe *other* organisms can learn and remember, we should similarly conclude that plants share these cognitive capacities. One form of learning that's been studied extensively is *habituation*, in which creatures exposed to an unexpected but harmless stimulus (a noise, a flash of light) will have a cautionary response that slowly diminishes over time. Think of entering a room with a humming refrigerator: it's initially annoying, but usually you'll get used to it and perhaps not even notice

after a while. True habituation is stimulus-specific, so with the introduction of a different and potentially dangerous stimulus, the animal will be re-triggered. Even in a humming room, you will probably startle at the sound of a loud bang. This is called *dishabituation*, and distinguishes genuine learning from other kinds of change, such as fatigue.

In 2014, Gagliano and her colleagues [tested](#) the learning capacities of a little plant called *Mimosa pudica*, a creeping annual also known as touch-me-not. Its name comes from the way its leaves snap shut defensively in response to a threat. When Gagliano and her colleagues dropped *M pudica* from a height (something the plant would never have encountered in its evolutionary history), the plants learned that this was harmless and didn't demand a folding response. However, they maintained responsiveness when shaken suddenly. Moreover, the researchers found that *M pudica*'s habituation was also context-sensitive. The plants learnt faster in low-lit environments, where it was more costly to close their leaves because of the scarcity of light and the attendant need to conserve energy. (Gagliano's research group was not the first to apply behavioural learning [approaches](#) to plants such as *M pudica*, but earlier studies were not always well-controlled so findings were inconsistent.)

But what about more complex learning? Most animals are also capable of *conditioned* or *associative* learning, in which they figure out that two stimuli tend to go hand in hand. This is what allows you to train your dog to come when you whistle, since the dog comes to associate that behaviour with treats or affection. In another [study](#), published in 2016, Gagliano and colleagues tested whether *Pisum sativum*, or the garden pea, could link the movement of air with the availability of light. They placed seedlings at the base of a Y-maze, to be buffeted by air coming from only one of the forks – the brighter one. The plants were then allowed to grow into either fork of the Y-maze, to test whether they had learned the association. The results were positive – showing that the plants learned the conditioned response in a situationally relevant manner.

The evidence is mounting that plants share some of the treasured learning capacities of animals. Why has it taken so long to figure this out? We can start to understand the causes by running a little experiment. Take a look at this image. What does it depict?



Figure 1: 'Leaping Laelaps' (1897) by Charles Robert Knight. Courtesy Wikipedia.

Most people will respond either by naming the general class of animals present ('dinosaurs') and what they are doing ('fighting', 'jumping'), or if they are dinosaur fans, by identifying the specific animals ('genus *Dryptosaurus*'). Rarely will the mosses, grasses, shrubs and trees in the picture get a mention – at most they might be referred to as the background or setting to the main event, which comprises the animals present 'in a field'.

In 1999, the biology educators James Wandersee and Elisabeth Schussler [called](#) this phenomenon *plant blindness* – a tendency to overlook plant capacities, behaviour and the unique and active environmental roles that they play. We treat them as part of the background, not as active agents in an ecosystem.

Some reasons for plant blindness are historical – philosophical hangovers from long-dismantled paradigms that continue to infect our thinking about the natural world. Many researchers still write under the influence of Aristotle's influential notion of the *scala naturae*, a ladder of life, with plants at the bottom of the hierarchy of capacity and value, and Man at the peak. Aristotle emphasised the fundamental conceptual divide between immobile, insensitive plant life, and the active, sensory realm of animals. For him, the divide between animals and humankind was just as stark; he didn't think animals *thought*, in any meaningful way. After the reintroduction of such ideas into Western European education in the early 1200s and throughout the Renaissance, Aristotelean thinking has remained remarkably persistent.

It's often adaptive for humans to treat plants as object-like, or simply filter them out

Today, we might call this systematic bias against non-animals *zoochauvinism*. It's well-documented in the [education system](#), in biology [textbooks](#), in publication trends, and media representation. Furthermore, children growing up in cities tend to [lack exposure](#) to plants through interactive observation, plant care, and a situated plant appreciation and knowledge by acquaintance.

Particularities of the way our bodies work – our perceptual, attentional and cognitive systems – contribute to plant blindness and biases. Plants don't usually jump out at us suddenly, present an imminent threat, or behave in ways that obviously impact upon us. [Empirical findings](#) show that they aren't detected as often as animals, they don't capture our attention as quickly, and we forget them more readily than animals. It's often adaptive to treat them as object-like, or simply filter them out. Furthermore, [plant behaviour](#) frequently involves chemical and structural changes that are simply too small, too fast or too slow for us to perceive without equipment.

As we are animals ourselves, it's also easier for us to recognise animal-like behaviour *as* behaviour. Recent findings in robotics indicate that human participants are more likely to attribute properties such as [emotion](#), intentionality and [behaviour](#) to systems when those systems conform to [animal](#) or human-like behaviour. It seems that, when we're deciding whether to interpret behaviour as intelligent, we rely on anthropomorphic prototypes. This helps to explain our intuitive reluctance to attribute cognitive capacities to plants.

But perhaps prejudice is not the only reason that plant cognition has been dismissed. Some theorists worry that concepts such as 'plant memory' are nothing but [obfuscating metaphors](#).

When we try to apply cognitive theory to plants in a less vague way, they say, it seems that plants are doing something quite unlike animals. Plant mechanisms are complex and fascinating, they agree, but not *cognitive*. There's a concern that we're defining memory so broadly as to be meaningless, or that things such as habituation are not, in themselves, cognitive mechanisms.

One way of probing the meaning of cognition is to consider whether a system trades in *representations*. Generally, representations are states that are about other things, and can stand in for those things. A set of coloured lines can form a picture representing a cat, as does the word 'cat' on this page. States of the brain are also generally taken to represent parts of our environment, and so to enable us to navigate the world around us. When things go awry with our representations, we might represent things that aren't there at all, such as when we hallucinate. Less drastically, sometimes we get things slightly wrong, or misrepresent, parts of the world. I might mishear lyrics in amusing ways (sometimes called 'mondegreens'), or startle violently thinking that a spider is crawling on my arm, when it's only a fly. The capacity to get it wrong in this way, to misrepresent something, is a good indication that a system is using information-laden representations to navigate the world; that is, that it's a cognitive system.

When we create memories, arguably we retain of some of this represented information for later use 'offline'. The philosopher Francisco Calvo Garzón at the University of Murcia in Spain has [argued](#) that, for a physical state or mechanism to be representational, it must 'stand for things or events that are temporarily unavailable'. The capacity for representations to stand in for something that's not there, he claims, is the *reason* that memory is taken to be the mark of cognition. Unless it can operate offline, a state or mechanism is not genuinely cognitive.

The mallow learns a new location when plant physiologists mess with its 'head' by changing the light's direction

On the other hand, some theorists allow that certain representations can only operate 'online' – that is, they represent and track parts of the environment in real time. The mallow's nocturnal capacity to predict where the Sun will rise, before it even appears, seems to involve 'offline' representations; other heliotropic plants, which track the Sun only while it is moving across the sky, arguably involve a kind of 'online' representation. Organisms that use only such online representation, theorists say, might still be cognitive. But offline processes and memory provide stronger evidence that organisms are not just responding reflexively to their immediate environment. This is particularly important for establishing claims about organisms that we are not intuitively inclined to think are cognitive – such as plants.

Is there evidence that plants do represent and store information about their environment for later use? During the day, the [mallow](#) uses motor tissue at the base of its stalks to turn its leaves towards the Sun, a process that's actively controlled by changes in water pressure inside the plant (called *turgor*). The magnitude and direction of the sunlight is encoded in light-sensitive tissue, spread over the mallow's geometric arrangement of leaf veins, and stored overnight. The plant also tracks information about the cycle of day and night via its internal circadian clocks, which are sensitive to environmental cues that signal dawn and dusk.

Overnight, using information from all these sources, the mallow can predict where and when the Sun will rise the next day. It might not have concepts such as ‘the Sun’ or ‘sunrise’, but it stores information about the light vector and day/night cycles that allows it to reorient its leaves before dawn so that their surfaces face the Sun as it climbs in the sky. This also allows it to re-learn a new location when plant physiologists mess with its ‘head’ by changing the direction of the light source. When the plants are shut in the dark, the anticipatory mechanism also works offline for a few days. Like other foraging strategies, this is about optimising available resources – in this case, sunlight.

Does this mechanism count as a ‘representation’ – standing in for parts of the world that are relevant to the plant’s behaviour? Yes, in my view. Just as neuroscientists try to uncover the mechanisms in nervous systems in order to understand the operation of memory in [animals](#), plant research is beginning to unravel the memory substrates that allow plants to store and access information, and use that memory to guide behaviour.

Plants are a diverse and flexible group of organisms whose extraordinary capacities we are only just beginning to understand. Once we expand the vista of our curiosity beyond animal and even plant [kingdoms](#) – to look at fungi, bacteria, protozoa – we might be surprised to find that many of these organisms share many of the same basic behavioural strategies and principles as us, including the capacity for kinds of learning and memory.

To make effective progress, we need to pay careful attention to plant mechanisms. We need to be clear about when, how and why we are using metaphor. We need to be precise about our theoretical claims. And where the evidence points in a direction, even when it is away from common consensus, we need to boldly follow where it leads. These research programmes are still in their infancy, but they will no doubt continue to lead to new discoveries that challenge and expand human perspectives on plants, blurring some of the traditional boundaries that separated the plant and animal realms.

Of course, it’s a stretch of the imagination to try to think about what *thinking* might even mean for these organisms, lacking as they do the brain(mind)/body(motor) divide. However, by pushing ourselves, we might end up expanding the concepts – such as ‘memory’, ‘learning’ and ‘thought’ – that initially motivated our enquiry. Having done so, we see that in many cases, talk of plant learning and memory is not just metaphorical, but also matter-of-fact. Next time you stumble upon a kerbside mallow bobbing in the sunlight, take a moment to look at it with new eyes, and to appreciate the window this little weed provides into the extraordinary cognitive capacities of plants.

ONE Follow-Up:

Is the following argument sound? If so, why? If not, why not?

1. The presence of cognitive functions like memory, learning, perception, and thought in living organisms is on an evolutionary continuum, with no absolute differences between different kinds of organisms, only grades or degrees of complexity.
2. But a necessary condition for a living organism's having a mind is its having *the capacity for consciousness*, that is, the capacity for *subjective experience*.
3. But unlike animals, plants lack the capacity for consciousness.
4. Therefore, plants do not have minds.

ONE Link:

“Animal Consciousness”: <https://plato.stanford.edu/entries/consciousness-animal/>

5. “If Work Dominated Your Every Moment Would Life Be Worth Living?”

By Andrew Taggart

Aeon 20 DECEMBER 2017

URL = <https://aeon.co/ideas/if-work-dominated-your-every-moment-would-life-be-worth-living>



Workers Leaving the Factory Lithograph, 1903 by Théophile Alexandre Steinlen. Image courtesy www.famsf.org

Imagine that work had taken over the world. It would be the centre around which the rest of life turned. Then all else would come to be subservient to work. Then slowly, almost imperceptibly, anything else – the games once played, the songs hitherto sung, the loves fulfilled, the festivals celebrated – would come to resemble, and ultimately become, work. And then there would come a time, itself largely unobserved, when the many worlds that had once existed before work took over the world would vanish completely from the cultural record, having fallen into oblivion.

And how, in this world of total work, would people think and sound and act? Everywhere they looked, they would see the pre-employed, employed, post-employed, underemployed and unemployed, and there would be no one uncounted in this census. Everywhere they would laud and love work, wishing each other the very best for a productive day, opening their eyes to tasks and closing them only to sleep. Everywhere an ethos of hard work would be championed as the

means by which success is to be achieved, laziness being deemed the gravest sin. Everywhere among content-providers, knowledge-brokers, collaboration architects and heads of new divisions would be heard ceaseless chatter about workflows and deltas, about plans and benchmarks, about scaling up, monetisation and growth.

In this world, eating, excreting, resting, having sex, exercising, meditating and commuting – closely monitored and ever-optimised – would all be conducive to good health, which would, in turn, be put in the service of being more and more productive. No one would drink too much, some would microdose on psychedelics to enhance their work performance, and everyone would live indefinitely long. Off in corners, rumours would occasionally circulate about death or suicide from overwork, but such faintly sweet susurrus would rightly be regarded as no more than local manifestations of the spirit of total work, for some even as a praiseworthy way of taking work to its logical limit in ultimate sacrifice. In all corners of the world, therefore, people would act in order to complete total work's deepest longing: to see itself fully manifest.

This world, it turns out, is not a work of science fiction; it is unmistakably close to our own.

'Total work', a term coined by the German philosopher Josef Pieper just after the Second World War in his book *Leisure: The Basis of Culture* (1948), is the process by which human beings are transformed into workers and nothing else. By this means, work will ultimately become *total*, I argue, when it is the centre around which all of human life turns; when everything else is put in its service; when leisure, festivity and play come to resemble and then become work; when there remains no further dimension to life beyond work; when humans fully believe that we were [born only to work](#); and when other ways of life, existing before total work won out, disappear completely from cultural memory.

We are on the verge of total work's realisation. Each day I speak with people for whom work has come to control their lives, making their world into *a task*, their thoughts an unspoken *burden*.

For unlike someone devoted to the life of contemplation, a total worker takes herself to be *primordially* an agent standing before the world, which is construed as an endless set of tasks extending into the indeterminate future. Following this taskification of the world, she sees time as a scarce resource to be used prudently, is always concerned with what is to be done, and is often anxious both about whether this is the right thing to do now and about there always being more to do. Crucially, the attitude of the total worker is not grasped best in cases of overwork, but rather in the everyday way in which he is single-mindedly focused on tasks to be completed, with productivity, effectiveness and efficiency to be enhanced. How? Through the modes of effective planning, skilful prioritising and timely delegation. The total worker, in brief, is a figure of ceaseless, tensed, busied activity: a figure, whose main affliction is a deep existential restlessness fixated on producing the *useful*.

What is so disturbing about total work is not just that it causes needless human suffering but also that it eradicates the forms of playful contemplation concerned with our asking, pondering and answering the most basic questions of existence. To see how it causes needless human suffering, consider the illuminating phenomenology of total work as it shows up in the daily awareness of two imaginary conversation partners. There is, to begin with, *constant tension*, an *overarching*

sense of pressure associated with the thought that *there's something that needs to be done*, always *something I'm supposed to be doing* right now. As the second conversation partner puts it, there is concomitantly the looming question: *Is this the best use of my time?* Time, an enemy, a scarcity, reveals the agent's limited powers of action, the pain of harrying, unanswerable opportunity costs.

Together, thoughts of the *not yet but supposed to be done*, the *should have been done already*, the *could be something more productive I should be doing*, and the *ever-awaiting next thing to do* conspire as enemies to harass the agent who is, by default, always behind in the incomplete *now*. Secondly, one feels guilt whenever he is *not as productive as possible*. Guilt, in this case, is an expression of a failure to *keep up* or *keep on top* of things, with tasks overflowing *because of* presumed neglect or relative idleness. Finally, the constant, haranguing impulse to get things done implies that it's empirically impossible, from within this mode of being, to *experience things completely*. 'My being,' the first man concludes, 'is an onus,' which is to say an endless cycle of unsatisfactoriness.

The burden character of total work, then, is defined by ceaseless, restless, agitated activity, anxiety about the future, a sense of life being overwhelming, nagging thoughts about missed opportunities, and guilt connected to the possibility of laziness. Hence, the taskification of the world is correlated with the burden character of total work. In short, total work *necessarily* causes *dukkha*, a Buddhist term referring to the unsatisfactory nature of a life filled with suffering.

In addition to causing *dukkha*, total work bars access to higher levels of reality. For what is lost in the world of total work is art's revelation of the beautiful, religion's glimpse of eternity, love's unalloyed joy, and philosophy's sense of wonderment. All of these require silence, stillness, a wholehearted willingness to simply apprehend. If meaning, understood as the ludic interaction of finitude and infinity, is precisely what transcends, here and now, the ken of our preoccupations and mundane tasks, enabling us to have a direct experience with what is greater than ourselves, then what is lost in a world of total work is the very possibility of our experiencing meaning. What is lost is seeking why we're here.

ONE Follow-Up:

Is the following argument sound? If so, why? If not, why not?

1. There is an important difference between (i) the concept of *human work* as such, that is, the concept of *human productive activity*, and (ii) the concept of *human work under the social system of large-scale capitalism*.
2. A life of "total work" under the social system of large-scale capitalism would indeed be defined by "ceaseless, restless, agitated activity, anxiety about the future,

a sense of life being overwhelming, nagging thoughts about missed opportunities, and guilt connected to the possibility of laziness,” and therefore such a life would indeed be alienating, self-defeating, filled with suffering, and ultimately meaningless.

3. But human work can occur *outside* the social system of large-scale capitalism.

4. Therefore, at least in principle, there could be a life of “total work” that is *also* a life in which our basic human needs for play, leisure, art, contemplation, conviviality, and spirituality are also satisfied.

TWO Links:

“Marx’s *Economic and Philosophical Manuscripts*”:

<https://plato.stanford.edu/entries/marx/#2.3>

“Marx’s Theory of Play, Leisure, and Unalienated Praxis”:

https://www.academia.edu/9832475/Marxs_Theory_of_Play_Leisure_and_Unalienated_Praxis
