

# For the First Time, Nuclear Fusion Process Produces More Energy Than Put Into It by Igniter

*The Wired Word* for the Week of January 1, 2023

## In the News

On December 5, scientists at the National Ignition Facility (NIF) in Livermore, California, achieved a milestone in the quest to use nuclear fusion to produce energy when they ignited a controlled nuclear fusion process that, for the first time, produced more energy than was put in by the laser igniter.

In terms of quantity, the energy output was small, but in terms of breakthrough, the gain was "monumental," said physicist Gilbert Collins of the University of Rochester in New York, a former NIF collaborator who is not currently involved with the work leading to the latest advance. "Since I started in this field, fusion was always 50 years away," Collins said. "With this achievement, the landscape has changed."

Nuclear fission is the type of nuclear energy production in use today. "Fission" is the process of splitting an atom into two or more smaller ones, thereby releasing energy from the bonds that held the original atom together.

Nuclear fusion is the type of nuclear energy production under development for the future. "Fusion" is the process of fusing two or more smaller atoms into a larger one. Fusion, by the way, is the process by which the sun makes energy.

At our present level of knowledge, fusion is the harder process to cause, but its proponents say it is worth pursuing because once the means of achieving fusion is made efficient and economical, it can provide another source of baseline power generation with only localized byproduct emissions and fewer long-lived radioactive waste materials.

Both fission and fusion produce long-lived radioactive materials (half-life greater than 200,000 years, although fusion plant design may keep the amount small; in addition, long-lived isotopes in fission are produced in the fuel itself, and so is a waste product, whereas fusion produces few or no radioactive waste products.

Additionally, proponents say, fusion reactors cannot sustain chain reactions so they can never melt down like fission reactors can.

Critics, however, maintain that focusing on the expected benefits overlooks some high-hurdle problems. *Wikipedia's* page on fusion power, which has been updated to include the results of the NIF achievement, notes "the necessary combination of temperature, pressure and duration [to achieve fusion] has proven to be difficult to produce in a practical and economical manner."

A second issue, according to *Wikipedia*, that affects common reactions is "managing neutrons that are released during the reaction, which over time degrade many common materials used within the reaction chamber."

What's more, while the sun and other stars make energy by fusion, they use ordinary hydrogen as the fuel. Because we cannot duplicate the extreme conditions of the sun and stars, proposed fusion reactors generally use heavy hydrogen isotopes (deuterium, tritium), which react at lower temperatures and pressures than the most common hydrogen isotope.

(See also the *Bulletin of the Atomic Scientists* article in the links list below for a detailed discussion of the difficulties. While written before the successful NIF experiment, the issues the article raises have not yet been overcome.)

Thus, science still has a long way to go before fusion is practical and economical. The NIF experiment this month used approximately 2 million-joules (MJ) of laser energy (2 MJ = ~0.56 kilowatt-hours [kW-h]) and got about 3 MJ (= ~0.83 kW-h) out. However, to generate 2 MJ of laser energy required about 300 MJ of energy (= ~830 KW-h) from the electrical grid. So, in reality, the current energy return for that experiment -- the most successful to date -- is 0.03 (or 0.3%). Still, many observers consider the achievement to be massive, given that just a few years ago the NIF laser could only get out about a thousandth of the energy it put in.

So this NIF accomplishment is a step in the journey toward producing energy by nuclear fusion, but the road beyond it is likely to be a long one. There are many fusion projects worldwide, and we don't know yet which, if any, is on the best path. Nonetheless, Collins compares the successful experiment to the invention of the transistor or the Wright brothers first flight.

More on this story can be found at these links:

[In a Breakthrough Experiment, Nuclear Fusion Finally Makes More Energy Than It Uses. \*ScienceNews\*](#)  
[Nuclear Fusion May Still Be Decades Away, But the Latest Breakthrough Could Speed Up Its Development. \*Phys.Org\*](#)  
[Fission and Fusion: What Is the Difference? \(includes video\) \*Office of Nuclear Energy\*](#)  
[Fusion Reactors: Not What They're Cracked Up to Be. \*Bulletin of the Atomic Scientists\*](#)  
[Fusion Power. \*Wikipedia\*](#)

### **Applying the News Story**

We are using the fusion news as an opportunity to discuss the energy that comes from God to "ignite" us physically, mentally, emotionally, socially and spiritually as well as to ignite our will. But we want to say clearly and plainly that we are *not* suggesting that God *is* energy. We sometimes hear that claim, and it is perhaps the notion behind the invocation from the *Star Wars* movies that says, "May the Force be with you!" in which "the Force" is an omnipresent energy that can influence events and may be harnessed by gifted individuals.

The idea of God as energy, however, does not agree with the Bible's assertions about God as the creator of all things. In the biblical understanding, energy is a power of God, but not identical with God himself. In the beginning, says Genesis 1, in the face of chaos and darkness, "God said, 'Let there be light,' and there was light" (Genesis 1:3). This is a statement of God *creating* energy, not of God *being* energy.

In the biblical realm, the energy that gives us life and that moves us to do good deeds or create good things, and that generates the commitment of ourselves to be God's people comes from God, often through the activity of the Holy Spirit.

### **The Big Questions**

1. When, if ever, have you been conscious of being energized in some way by God.
2. What might it mean to be ignited by God physically? mentally? emotionally? socially? spiritually? to have our will ignited by God?
3. When have you experienced inspiration as a gift of God?
4. When have you been aware of God calling you? convincing you of something? guiding you?

5. Energy is defined as the capacity to do work, and may be "potential" (not doing anything), "kinetic" (in motion), or in some other form. What are some forms of energy that God has given Christians, as individuals or collectively. How might using that energy serve to energize others?

### **Confronting the News With Scripture and Hope**

Here are some Bible verses to guide your discussion:

#### **John 15:26**

*When the Advocate comes, whom I will send to you from the Father, the Spirit of truth who comes from the Father, he will testify on my behalf.* (For context, read [John 15:18-27](#).)

In this statement from Jesus, the word "Advocate" is an alternative name for the Holy Spirit. Note that the statement indicates a functional relationship 1) between God the Father and the Holy Spirit in that the Spirit "comes from" the Father, and 2) between God the Son and the Holy Spirit in that the Son is able to send the Spirit from the Father to Jesus' followers.

The original Greek phrase rendered here in English as "comes from" is *ekporeuomai para*, which can also be translated "proceedeth from" (as did the old King James Bible of 1611 and the much newer Common English Bible of 2011, where it updated in modern English to "proceeds from") This verse is likely the source for the language of the Nicene Creed, where it says, "I believe in the Holy Spirit, the Lord, the giver of life, who proceeds from the Father and the Son, ..."

*Ekporeuomai para* can also be rendered as "goes out from" (as does the New International Version) or "issuing from" (as does The Message).

Whichever rendering is used, the implication is that the Spirit responds to the prompting of the Father and the Son and carries out the work of God in the lives of human beings. That implication, however, should not be reduced to view the Spirit as merely a divine "force," or a divine "ambassador" for the Father and the Son -- as one theologian has said, "We can pray to receive the Holy Spirit, and we can pray for that directly to the Holy Spirit."

Theologian George W. Forell explains, "In mysticism ... divine force is understood in impersonal terms that the result is the self-identification of the individual with God. Humanity and God run into each other, and it becomes ever more difficult to see where humanity ends and God begins. ... This is impossible within biblical Christianity because of the insistence upon the Holy Spirit as a person. [The Spirit] is not divine energy, ... not some undefined divine force; rather [the Spirit] is the third person of the Trinity [who] meets human beings personally." (From "The Holy Spirit and the Church," in Forell's *The Protestant Faith*)

Or, as one preacher put it, "The Holy Spirit is God himself at work in us."

Nonetheless, the Spirit conveys the energy of God. The action of the Spirit that Jesus calls for in the verse above is to testify, but in other settings the energy of God through the Spirit is to inspire, to convict, to convince, to guide, to bolster, to assure, to create a sense of yearning for that which is greater than we are, to help, to bless, to enlighten, to endow believers with fruits of the Spirit, and other actions.

**Questions:** Is it important to distinguish the action of the Holy Spirit from God in general? For example, is there any functional difference between saying, "May the Holy Spirit bless you" and "May God bless you"? If there is no functional difference from the standpoint of the human recipient, then what is the point of identifying the work of God's Holy Spirit?

#### **Isaiah 40:28-31**

*Have you not known? Have you not heard?  
The LORD is the everlasting God,*

*the Creator of the ends of the earth.  
He does not faint or grow weary;  
his understanding is unsearchable.  
He gives power to the faint  
and strengthens the powerless.  
Even youths will faint and be weary,  
and the young will fall exhausted,  
but those who wait for the LORD  
shall renew their strength;  
they shall mount up with wings like eagles;  
they shall run and not be weary;  
they shall walk and not faint.*  
(For context, read [Isaiah 40:1-33](#).)

Chapters 40-55 in the book of Isaiah were addressed to the people of Judah while they were in exile from their homeland and living as captives in Babylon. They've been there for a long time, several decades. They didn't know it yet, but that time was soon to come to a close. God was working in the movements of history, and the Babylonians were about to be overcome themselves by the Persians, and as things would turn out, the Persian king would let the exiles go back home.

The prophet behind chapters 40-55, was announcing to the people of Judah that God was about to deliver them.

The verses above are part of a longer speech in which the prophet seeks to rehabilitate the exiles' concept of God. In those times, religion and politics were inseparable. So when Babylon had defeated Judah, many of the Jews concluded that the gods of Babylon were stronger than the God of Judah. So in his speech, the prophet reminds the people of the power of God Almighty.

The prophet proclaimed that not only was God *able* to rescue them, but also that he was *willing* to do so. And that is where the prophet begins talking about God giving strength to the faint and powerless, so that they who wait for the Lord -- who rely on him -- will have a sustaining vigor that exceeds even that of the young and naturally strong.

In the context of the passage, the exiles are surely the ones who are faint and powerless. They have no say-so over what happens to them. But they should not surrender to despair, because God is both able and willing to help them. For their part, they need to wait for the Lord, and when they do, says the prophet, "they shall mount up with wings like eagles, they shall run and not be weary, they shall walk and not faint." So if they trust God, they can carry on, not like the exhausted and defeated, but like those who run steadily, without growing weary.

The God-imparted energy these verses refer to is the power to persevere, to wait for the Lord.

**Questions:** What makes perseverance an energetic endeavor? How do you suppose those who are waiting for the Lord should use their time in that interval?

#### **Acts 2:1-4**

*When the day of Pentecost had come, they were all together in one place. And suddenly from heaven there came a sound like the rush of a violent wind, and it filled the entire house where they were sitting. Divided tongues, as of fire, appeared among them, and a tongue rested on each of them. All of them were filled with the Holy Spirit and began to speak in other languages, as the Spirit gave them ability.* (For context, read [Acts 2:1-21](#).)

Reading the above description of what happened to the followers of Jesus on the day of Pentecost, shows that, at minimum, the Holy Spirit *electrified* those followers, causing them to rush out into the street and start proclaiming "God's deeds of power" (2:11).

Another word for personal electrification is "inspiration," which may be defined as 1) the internal motivation that enables us to do that which we might not otherwise be inclined to do and 2) the sudden understanding of what to do. But that definition could also apply to our malevolent intentions being activated. Inspiration that results in us cooperating with God's will, however, is the Holy Spirit energizing the power within us.

A man was observing an oil field worker as he prepared to dynamite some buried rock. The worker took a stick of dynamite and started cutting it with a knife. The observer began to panic at being so close, but the worker said, "Don't worry. This dynamite won't explode unless we excite it. Hitting it with a hammer would cause it to explode, but slicing it with a knife won't."

Divine inspiration is when the Holy Spirit excites the ability that dwells within us, releasing creativity and boldness. That was certainly what happened on the day of Pentecost.

The Bible itself is a product of inspiration, God at work through the Holy Spirit with the writers. A Bill Keane "Family Circle" comic has a little girl asking her mom: "Did God write the Bible himself? Or did he have some Holy Ghost writers?" Well, in a sense, God did.

**Questions:** Think of an occasion when you felt inspired. What triggered it? Did it occur to you that the Holy Spirit may have been involved? How can we test our inspirations to weed out those that are ungodly?

### **Colossians 1:29**

*For this I toil and strive with all the energy that he powerfully inspires within me.* (For context, read [Colossians 1:24-29](#).)

In verses 24-29, Paul testifies to the meaning of his personal suffering. While in prison, Paul considers his suffering part of Christ's suffering for the church. As part of Christ's body, the church, Paul received the benefits of Christ's suffering and is therefore rejoicing to be part of it. How humans can participate in the life offered by God was once a mystery (v. 26), but now God has revealed it to Christ's followers. And the truth is, Christ lives in us and gives us our hope. Therefore, Paul put all his God-given energy -- physical, mental, emotional, social and spiritual -- into proclaiming this glorious opportunity to all who would listen.

**Question:** Because, so far as we know, Paul had no spouse or family, he may have had fewer responsibilities to fulfill apart from his work for Christ and the church, but how might those who have family responsibilities put their physical, mental, emotional, social and spiritual energy into the work of God?

### **For Further Discussion**

1. Respond to this excerpt from TWW team member Stan Purdum's sermon, "Usable Christianity," based on John 16:1-15:

"Many high-tech products arrive able to do more things than most users need or even want -- so many, in fact, that many users are overwhelmed trying to figure out how to operate the basic functions. These devices violate a primary rule of usability -- that a gadget should first present users with a limited number of features, those likely to be the most useful, and then allow users to get to more advanced features if they want to access them. Instead, many of today's devices put every last feature and function upfront, which is why the phrase 'steep learning curve' exists in our vocabulary today.

"Now consider that in our reading from John 16 for today, this primary and very important rule of usability plays a role in what Jesus says to his disciples at the Last Supper. We take note that this is Jesus' last evening with his disciples before his arrest and crucifixion, but although he knows that his time with them is about to come to an abrupt end, he is not trying to stuff a lot of final instructions into the conversation. This might seem odd, for these followers are the ones whom Jesus is going to rely on to carry on with the spreading of the gospel, and they aren't nearly ready. In fact, Jesus quite calmly tells them as much: 'I still have many things to say to you, but you cannot bear them now' (v. 12).

"Jesus isn't saying that they are resisting learning, but rather that they have not yet had the experiences that will enable them even to perceive what knowledge they will need. There are encounters ahead for them where there are things they will need to know, but from their present viewpoint, they can't even imagine what those things are. In essence, that's what Jesus is saying to his followers: 'There are some things I need to tell you, but you are not yet in a position to comprehend them.'

"But then Jesus tells them something that changes everything, and it explains why he is so calm. After he departs, Jesus says, the Holy Spirit will come to guide them and to convey to them what the Spirit hears from Jesus.

*"To return for a moment to that primary rule of usability, Jesus is leaving his disciples with what they can handle at the moment and need for the present, but he is also telling them that when they need more from him, the Spirit is the Divine 'Mechanism' who will provide it.*

"Thus, there would be no last-minute flurry of overwhelming instructions that the disciples could not possibly absorb. No. The law of usability would be observed. Jesus would leave them with what they'd been able to grasp so far, and as they needed more and were able to receive it, the Spirit would supply it.

"What's more, the Spirit will not bring someone else's teachings, but those of Jesus. As Jesus explained it, 'When the Spirit of truth comes, he will guide you into all the truth, for he will not speak on his own ... He will glorify me, because he will take what is mine and declare it to you' (vv.13-14).

"To us who follow Jesus today, there is great value in hearing these words, for they remind us of two valuable things:

"First, his words about the role of the Holy Spirit remind us that Jesus continues to speak to us, and not just with things he already taught 2,000 years ago and are recorded in scripture. He also speaks to us with new revelations that help us navigate a world that is quite different from the world the original disciples knew. God did not stop speaking when the Bible was complete, and Jesus did not stop speaking when he ascended into heaven.

"Thus we should look to the Bible as God's Word for our lives, but our surface understanding of the Bible is not necessarily his last word on everything. The Spirit takes the things that Jesus wants us to know today, and communicates those to us through many channels. Sometimes it is through new insight on the scriptures we thought we already knew, but the Spirit also speaks through the power of inspiration, insight, revelation and personal experience, especially as we seek to listen prayerfully.

"The second valuable thing that Jesus' words about the role of the Spirit tell us is that no one of us understands all at once all that Christ has for us.

"It simply is impossible to anticipate all that we will need from Jesus as we mature and encounter the twists and turns of life. But the Holy Spirit, operating by the primary rule of usability, declares to us what is Christ's, as we need it, as our experience of people, places, actions, touch, sight, sound, victories, failures, sleeplessness, devotion, love, faith and reverence make us capable of hearing it.

"Our responsibility is to listen for it prayerfully and faithfully."

2. Discuss this: Gregory of Nazianzus, a fourth-century Archbishop of Constantinople, said of the Trinity, "No sooner do I conceive of the One than I am illumined by the splendor of the Three; no sooner do I distinguish Three than I am carried back into the One. When I think of any of the Three, I think of Him as the Whole, and my eyes are filled, and the greater part of what I am thinking escapes me. I cannot grasp the greatness of that One so as to attribute a greater greatness to the rest. When I contemplate the Three together, I see but one torch, and cannot divide or measure out the undivided light."

## **Responding to the News**

The new year celebration sometimes finds us trying to re-energize aspects of our lives. Consider inviting the Holy Spirit to inspire and empower you to see and feel and hear God's word in ways that create more energy for the ways that bring you nearer to God every day.

## **Prayer (Church of South India, 20th Century, Altered)**

Everlasting God: You have revealed Yourself as Father, Son and Holy Spirit, and ever live and reign in the perfect unity of love. Grant that we may always hold firmly and joyfully to this faith, and living in praise of your divine majesty, may finally be one in you; who are three persons in one God, forever and ever. Amen.

## Other News This Week

# Journalist Investigates How Dogs Predict the Future

*The Wired Word for the Week of January 1, 2023*

## In the News

Michaeleen Doucleff, a science correspondent for National Public Radio, produced a piece last month about a mystery her husband Matt's family had been trying to solve for decades: How did their dog Donut unfailingly know exactly when the school bus carrying Matt and his brother would arrive back home? Could Donut tell time?

This year, Doucleff's investigation led to psychologist Alexandra Horowitz, who studies dog cognition. She said Donut could "smell time," and in this way could predict when the school bus would arrive.

Dogs and humans pick up on various tips in their surroundings to determine how to organize their day, Horowitz explained. Dog lovers sometimes say their dogs have built-in body clocks to tell them that it is time to eat, sleep, wake up, or go out to do their business. External factors, such as the amount or angle of sunlight in a room also influence their behavior.

But Horowitz took her theory about canine capability further: "Dogs are living in basically an olfactory world, and I think they are able to track time with smells." She surmised that Donut knew the smell of the boys she lived with, which were strongest in the morning, when they left for school. Over the course of the day, their "signature scent" dissipated, until it reached a level Donut learned to associate with the time the school bus would return with her boys.

Cognitive scientist Lucia Lazarowski, says, "Tracking and trailing dogs are probably using the intensity of odors, based on how old the odor is, to determine the direction of a track or a trail," she says. "So newer, more recent odors are going to be more intense and stronger than odors that have dissipated and are weaker over time."

Doucleff wrote that Donut was able "to predict the future -- to predict when the school bus would arrive [because she] ... literally smelled time pass."

"Odors that are lying on the ground or on the sidewalk outside tell us -- or dogs -- about the past. For example, they say who's been there," Horowitz says. "And if there's a breeze coming up the street, that might bear the odor of someone who's coming around the corner. So it's telling us something about our near future."

According to *CareCredit.com*, a company that works with pet owners to finance veterinary care and other services for animals, "Scientists guess the dog's sense of smell is somewhere between 10,000 to 100,000 times more acute than ours. One of the reasons a dog has such better smelling ability than us is the number of scent receptors. For every scent receptor a human has, a dog has about 50."

The canine group known as hounds is made up of sight hounds, who visually spot an object, and scent hounds, who identify their target by the use of their noses. The latter can pick up scents left on the ground or carried on a breeze. The number of scent receptors a dog has depends on the length of a dog's snout, with the bloodhound leading the pack with approximately 300 million scent receptors!

Some of the things canines can detect with their noses: human emotions, such as fear, anxiety and sadness; infections and diseases such as cancer; prey for hunters; criminals for law enforcement officers; drugs and medications; traces of peanuts in food; glucose levels in diabetics; bed bugs; missing persons; cadavers; explosives; chemicals.

In scent detection classes, dogs can be trained to focus on specific smells while ignoring myriad other odors, so as to identify the particular object the trainer wants to find. CareCredit calls this skill "keep[ing] their noses on the prize."

More on this story can be found at these links:

[Can Dogs Smell Time? Just Ask Donut the Dog. NPR](#)  
[Fun Facts About Your Dog's Sense of Smell. CareCredit.com](#)

### **Applying the News Story**

We are aware that using our five senses, including the sense of smell, to talk about God has its limits. God is not a human being ([Numbers 23:19](#)) but spirit ([John 4:24](#)), and is not subject to the same limitations humans and other animals experience. In speaking about God, the Bible does use language that is suggestive of the five senses, however, to help us glimpse some realities about how God relates to creation.

Our lesson also explores how the sense of smell is an integral part of worship, forgiveness, prayer, giving and sacrifice.

### **The Big Questions**

1. What is the scent that -- for you -- evokes memories of church? How, if at all, have the scents and memories changed over time?
2. If you had to describe God using a scent, smell or aroma, what word(s) would you use, and why?
3. What smells might offend God, and why? What smells might be pleasing to God, and why?
4. What scientists call anosmia is the loss of a sense of smell. If that affects you or someone you know, what effect, if any, do you think it has on one's sense of the creation and even on one's spirituality? Are all five senses needed to have a full appreciation of God's creation? Why or why not?
5. How might aroma or fragrance be used to enhance private prayer and corporate worship?

### **Confronting the News With Scripture and Hope**

Here are some Bible verses to guide your discussion:

#### **Matthew 2:11**

*On entering the house, [the magi] saw the child with Mary his mother, and they knelt down and paid him homage. Then, opening their treasure chests, they offered him gifts of gold, frankincense, and myrrh. (For context, read [Matthew 2:1-11](#).)*

Often, when we sing Christmas carols, we may be familiar only with first verses. But singing carols in their entirety can enrich our worship experience and deepen our understanding of the theology upon which the lyrics are based.

Such is the case with the carol, "[We Three Kings of Orient Are.](#)" The first verse introduces the magi, with the next three verses each describing one of the gifts brought to the Christ child: gold, frankincense and myrrh. In the second verse, author John H. Hopkins wrote that gold represented the royalty of the child.

In verse three, Hopkins connects the gift of fragrant frankincense to the presence of "a Deity nigh" in the child. In [Leviticus 2:1-2 \(ESV\)](#), we learn that when someone brought a grain offering to the Lord, they were to pour oil and frankincense on it, which the priest would burn as a "memorial portion on the altar, a food offering with a pleasing aroma to the LORD."

Then in verse four, Hopkins speaks of the gift of aromatic myrrh, which is mentioned in [John 19:39](#) as one of the substances (along with aloe) brought to embalm the body of Jesus after his death. A strange and foreboding present for a newborn baby, in some ways, but also reflective of the use of myrrh as an ingredient in the holy oil used to anoint and consecrate kings and priests in ancient Israelite temple worship ([Exodus 30:23-25](#)) and in the purification of Queen Esther ([Esther 2:12](#)). But Hopkins focuses on myrrh as a sign of the suffering, death and burial of Christ:

Myrrh is mine; its bitter perfume  
breathes a life of gathering gloom ...

Finally, in verse 5 of the carol, Hopkins exults in Christ's resurrection, repeating the distinct identities suggested by the gifts of the magi (gold for a King, frankincense for God and myrrh for a sacrifice):

Glorious now behold him arise;  
King and God and sacrifice!

**Questions:** What gifts might be brought to a shower welcoming a new baby into the world today? How might they be similar to and different from the gifts the magi brought?

What do you suppose the house smelled like when the magi first found Mary and the baby? How do you think the smells changed once the magi opened their gifts for the Christ child?

### **Philippians 4:18**

*... I have received from Epaphroditus the gifts you sent, a fragrant offering, a sacrifice acceptable and pleasing to God.* (For context, read [Philippians 4:10-20](#).)

In this passage, Paul saw the material and/or financial gifts from the Philippian believers as an expression of their kind concern for him and desire to share in his distress. They wanted in some small way to help meet his needs, particularly when he was imprisoned for his testimony about Jesus.

Some offerings are easy to give, because they come out of our surplus or excess and cost us little to nothing. Other offerings are really an expression of our willingness to trust God to meet our needs, when we have no idea how he will do so. When we give our "widow's mite" ([Mark 12:41-44](#)) or the last bit of flour and oil left in our cupboard ([1 Kings 17:8-16](#)), we give sacrificially out of our poverty.

We are reminded of the old story about the barnyard animals who were asked to contribute to a meal for hungry refugees. All the animals brought what they had to offer: milk from the cow, eggs from the hen, cheese from the goat, and so on. But when the pig offered bacon and ham hocks, all the other animals felt a twinge of embarrassment, realizing that they offered what they could easily do without, while she was willing to sacrifice her life!

**Questions:** What makes a gift "a fragrant offering, a sacrifice acceptable and pleasing to God"? When have you received such a gift? How did you react to it?

### **Luke 23:34**

*Then Jesus said, "Father, forgive them, for they do not know what they are doing." And they cast lots to divide his clothing. (For context, read [Luke 23:33-34](#).)*

### **Ephesians 4:32; 5:1-2**

*Be kind to one another, tenderhearted, forgiving one another, as God in Christ has forgiven you. Therefore be imitators of God, as beloved children, and walk in love, as Christ loved us and gave himself up for us, a fragrant offering and sacrifice to God. (For context, read [Ephesians 4:31-32; 5:1-2](#).)*

### **Romans 12:1**

*I appeal to you therefore, brothers and sisters, on the basis of God's mercy, to present your bodies as a living sacrifice, holy and acceptable to God, which is your reasonable act of worship. (For context, read [Romans 12:1-2, 9-21](#).)*

Paul based his instructions regarding the kindness, tenderness, love and forgiveness we are to show one another upon God's own example of kindness, tenderness, love and forgiveness shown toward us in Christ.

**Questions:** What transformed the horrific crucifixion of Christ into "a fragrant offering" to God? What can transform any mistreatment we may suffer as followers of Christ into fragrant offerings to God? What does it mean "to present your bodies as a *living sacrifice*" to God?

### **2 Corinthians 2:14-16**

*But thanks be to God, who in Christ always leads us in triumphal procession and through us spreads in every place the fragrance that comes from knowing him. For we are the aroma of Christ to God among those who are being saved and among those who are perishing: to the one group a fragrance from death to death, to the other a fragrance from life to life. (For context, read [2 Corinthians 2:5-8, 14-17](#).)*

These verses follow Paul's remarks about a person in the fellowship of believers who had caused harm to the community by committing egregious sin. The discipline or punishment of the sinner, Paul insisted, should not be the last word of the community, however; rather they were to "forgive and console him, so that he may not be overwhelmed by even worse grief ... reaffirm your love for him" (vv. 7-8).

**Questions:** How can the aroma of a Christian smell so radically different to different people -- the stench of death to some and the aromatic fragrance of life to others? In what sense are Christ-followers the aroma of Christ among those who are being saved? In what sense are they the aroma of Christ among those who are perishing?

How does knowing Christ produce a fragrance of forgiveness in Christ-followers that spreads throughout the world?

### **For Further Discussion**

1. Discuss this: What did the garden of Eden smell like? What was the smell of Egypt to the enslaved, then the smell of the desert and Red Sea as Moses led them? What was the smell of the seaside in Galilee? The temples? The Garden of Gethsemane? The smell of prison to the prophets and apostles?

2. Consider this, from TWW team member Mary Sells:

"For me, aroma is a trigger of memory. I ordered a treat for myself for Christmas, coffee from a roasting company in San Francisco where I lived in my mid-20s. When it arrived and I opened the bag of coffee, I was immediately overwhelmed with a literal flood of happy memories from those days -- the people, the places, etc. It was shocking to me how strong the response in me was just to the aroma. Don't get me wrong -- the taste of the first cup was great, but nowhere near the feelings I had from the scent of the beans.

"I used to live in Boston and would occasionally stop by a flower kiosk to get a few stargazer lilies, a very heady fragranced variety. Well, when my dad passed away, there were many flower arrangements with lilies and, after that, I cannot take the smell of lilies at all! In fact, on the few occasions when I receive flowers,

if they contain lilies I have to pull them out and throw them away!"

How has some fragrance or odor triggered a memory for you?

3. TWW team member Bill Tammeus commented: "I wonder what it is that attracts some of us (sometimes) to what we call the 'smells and bells' of high-liturgy worship services at Catholic or Episcopal churches (among others). Perhaps we just have a nose for the divine.

"I'm both blessed and cursed. I lost my sense of smell because of year-round low-grade allergies decades ago. About 5% of it returned some 10 or 12 years ago after nasal surgery, but even that comes and goes. So fill a church with fragrance and I might not even notice."

Some worshippers (who suffer from allergies or asthma, for example) value a "scent-free" zone in churches where they can be separated a little from strong perfumes. But incense has a way of permeating an entire sanctuary. In such a case, the smell may be inescapable and even keep some people away from certain high holy services.

When are you most aware of scents in worship or other church events? When, if ever, are such fragrances positive, and when are they negative for you? What makes those experiences of odors positive or negative?

4. TWW team member, Joanna Loucky-Ramsey, recalled what happened when she and her husband purchased their first home in Portland, Oregon.

"Our initial experience was almost heavenly," Loucky-Ramsey wrote. "The house was near a bakery, from which wafted a delicious sugary aroma.

"What we didn't know at the time was that the city was in the process of authorizing the construction of a sewage processing plant, which emitted a wretched odor 24/7 that forced us to keep our windows closed in the heat of summer and avoid going outdoors except when absolutely necessary. But even with our attempts to avoid the horrid smell, it seemed to seep unbidden through our walls. We felt like prisoners in our own home.

"We complained to city officials, to no avail. Finally, we moved to Alaska, as far away from the offensive stench as we could get!

"I have no doubt that the change in the smell of the neighborhood negatively impacted the health of local residents and property values in our part of town," Loucky-Ramsey added. "Who wants to live in an environment that stinks to high heaven?"

When have you experienced a smell that was overpowering, either in a good or a bad way? How did you react to that smell?

5. React to this, also from Joanna Loucky-Ramsey:

"I remember when my first pair of dogs returned home from an adventure smelling of *eau de skunk parfum*.

"I adored my dogs, but there was no way I was going to let them in the house smelling like that! We did the best we could to deodorize and comfort them, and, as the offending odor dissipated, slowly reintroduced them to full participation in family life.

"It struck me that the odor left by the skunk could serve as a metaphor for our sin or for the sin others perpetrate against us. As much as God loves us, he hates the sin that hides the lovely fragrance of the image of God within each of us. God wants to welcome each of us into his family and into the heavenly home he has prepared for us, but we need to be "deodorized" from the *eau de sin parfum* that would mar the entire experience of being in God's fragrant presence.

"Just as our dogs needed our help to get rid of the smell of skunk, we need God's help to purge us from the offense of sin that permeates our nature and masks who God created us to be. That's what Jesus accomplished by his death and resurrection: to make us new and whole ([2 Corinthians 5:17](#))."

## Responding to the News

This week, any time you apply perfume or cologne, or bake bread, cook supper, or sit down for a meal, take a moment to reflect on what kind of smell your life is spreading in your community. Is it a fragrance that offends? Or a scent that attracts people to come closer, to discover the source of the enticing, intoxicating aroma in the

person of Jesus the Christ? Pray that your life will increasingly be characterized by the latter, rather than the former.

**Prayer** Suggested by [Psalm 141:1-2](#); [Revelation 5:5-14](#); [Revelation 8:1-5](#)

Lamb of God, we join with living creatures and elders who fall before you in worship, carrying harps and golden bowls of incense, which are the prayers of the saints. With them, we declare you worthy of all power and wealth and wisdom and might and honor and glory and blessing, for by your blood you ransomed for God saints from every tribe and language and people and nation; you have made them a kingdom and priests serving our God! May our prayer be counted as incense before you, an aroma pleasing to you. Amen!

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