

Cybersecurity and Spiritual Safety

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Good morning. I am honored to have the chance to speak to you today.

As you probably know, we are under attack by hackers and others seeking to steal our online identities or information. Some attacks in the news recently included Target, Home Depot, Sony, and the IRS. In one of the largest attacks, the U.S. Office of Personnel Management reported the theft of sensitive information from twenty-two million people—virtually anyone who had undergone a government background check in the last fifteen years. In addition, there are lots of online scams just waiting to trap us.

We are also under spiritual attack. As stated in 2 Nephi 2:27, Satan and his followers are doing everything that is possible to make us “miserable like unto” them. Brigham Young said:

It was revealed to me in the commencement of this Church, that the Church would spread, prosper, grow and extend, and that in proportion to the spread of the Gospel among the nations of the earth, so would the power of Satan rise.¹

Recently President Thomas S. Monson stated, “Where once the standards of the Church and the standards of society were

mostly compatible, now there is a wide chasm between us, and it’s growing ever wider.”²

However, as threatening as this may seem, we also have been promised spiritual protection. Today I am going to speak about some ways to improve our computer-security behavior, and I am going to offer some spiritual-behavior tips to keep us safe spiritually. While neither of these lists is complete, they are a good place to start.

Security Warnings and Habituation

As was mentioned, I am a professor in the Information Systems Department. I do research at the intersection of neuroscience and behavioral information security. Basically, my research team and I study what is going on in people’s brains when they are interacting with security messages.

We have discovered some interesting things about how and why people behave the way they do in a computer-security setting. Our research shows that when computer users are exposed to a security message more than

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once, on the second—and on any following—repetition, the brain saves energy by relying on memory rather than visually processing that security message on subsequent viewings.

The region at the back of the brain, called the occipital lobe, is responsible for visual processing and is one of the main areas in which we saw a decreased response over the repetitions. As you can guess, this is problematic because we are tuning out these messages without really seeing them. We have developed some variations on the security messages, and these variations cause the computer users' brains to pay attention. In this way—working *with* biology instead of against it—we can make users more secure by changing the software rather than by increasing the training for users.

In a sense, this habituation to security messages is like disregarding the promptings of the Holy Ghost. If we don't act on the promptings of the Holy Ghost, it can be harder for us to be aware of future promptings. We might even tune out the still small voice.

Elder Ronald T. Halverson said:

Many of us get so involved in our day-to-day tasks and worldly pursuits that we do not notice the many small miracles that constantly occur around us. This is one reason we may lose contact with the Holy Spirit and lose awareness of His promptings. . . .

. . . The Lord knows that unless we keep the commandments and pray daily and read the scriptures, the world and its influences can pull us away from the strait and narrow path and dull our senses to the whisperings of the Spirit.³

We must be spiritually in tune in order to recognize and be obedient to promptings when they come. We can spiritually prepare ourselves to receive and then respond to promptings of the Spirit in every situation. When we keep the commandments, He will tell us in our minds and hearts what we should

do so that we can know the direction we need to go in our lives. "By the power of the Holy Ghost [we] may know the truth of all things."⁴

For most of us, it is not always easy to discern the whisperings of the Spirit, so it is something we need to work on daily. Through obedience we can receive protection, blessings, and insights.

Phishing

Computer users may receive emails that seem legitimate but are not. These are called phishing emails. They tend to offer some unearned benefit or may even trick us into providing information to fix a perceived mistake. Certainly most of us have heard of the Nigerian prince who just needs a little investment from us to be able to rescue his great wealth.

What is trickier, however, is the email that looks like it is from our bank or a company from which we purchased something online. Phishing email messages often include official-looking logos from real organizations and other identifying information taken directly from legitimate websites.

My colleagues and I did some research examining phishing emails. We used eye-tracking technology to capture what specific parts of the email messages the participants noticed. Unfortunately, most of our participants did not notice the suspicious parts of these emails.

Following are some best practices for avoiding being phished:

- Don't click on links in email messages.
- Type addresses directly into your browser or use your personal bookmarks.
- Check the security certificate before entering personal or financial information into a website.
- Don't enter personal or financial information into pop-up windows.

- Learn to identify suspected phishing emails—watch for gifts or the loss of an existing account.
- Check the source of information.

Similarly, in today's world we are faced with all kinds of counterfeit happiness. It is so easy to become distracted and waste our precious time on mindless entertainment rather than to be engaged in worthwhile activities, such as scripture study or temple attendance.

President Dieter F. Uchtdorf said:

One of the adversary's methods to prevent us from progressing is to confuse us about who we really are and what we really desire.

We want to spend time with our children, but we also want to engage in our favorite . . . hobbies. We want to lose weight, but we also want to enjoy the foods we crave. We want to become Christlike, but we also want to give the guy who cuts us off in traffic a piece of our mind.

Satan's purpose is to tempt us to exchange the priceless pearls of true happiness and eternal values for a fake plastic trinket that is merely an illusion and counterfeit of happiness and joy.⁵

An example of one of Satan's counterfeits is pride versus self-worth. Haughty pride is a temporary and poor substitute for a correct sense of one's own value. How about leisure and ease versus fulfillment? A common illusion in our day and age is that we can find happiness in a life of leisure and ease. The truth is that we are far more content when laboring daily in a cause we believe to be important enough to spend our entire lives on.

In Doctrine and Covenants 130:20–21 we read:

There is a law, irrevocably decreed in heaven before the foundations of this world, upon which all blessings are predicated—

And when we obtain any blessing from God, it is by obedience to that law upon which it is predicated.

About a hundred years ago Elder James E. Talmage wrote:

The present is an age of pleasure-seeking, and men are losing their sanity in the mad rush for sensations that do but excite and disappoint. In this day of counterfeits, adulterations, and base imitations, the devil is busier than he has ever been in the course of human history, in the manufacture of pleasures, both old and new; and these he offers for sale in most attractive fashion, falsely labeled, "Happiness." In this soul-destroying craft he is without a peer; he has had centuries of experience and practice, and by his skill he controls the market. He has learned the tricks of the trade, and knows well how to catch the eye and arouse the desire of his customers. He puts up the stuff in bright-colored packages, tied with tinsel string and tassel; and crowds flock to his bargain counters, hustling and crushing one another in their frenzy to buy.

Follow one of the purchasers as he goes off gloatingly with his gaudy packet, and watch him as he opens it. What finds he inside the gilded wrapping? He had expected fragrant happiness, but uncovers only an inferior brand of pleasure, the stench of which is nauseating.⁶

Real joy and happiness come from living in such a way that our Heavenly Father will be pleased with us. As we learn in section 52 of the Doctrine and Covenants, humility and obedience help us understand the Lord's "pattern in all things, that ye may not be deceived; for Satan is abroad in the land, and he goeth forth deceiving the nations."⁷

Install Software Updates

Another security tip is to keep your software up to date. Some security experts even say that applying software updates is one of the most important things you can do with your computer. If you don't update your software, you are very likely going to get some kind of malicious software in your system and even get hijacked. Virus writers, hackers, and

other ill-intentioned individuals are constantly coming up with new and inventive ways to attack.

The majority of software updates are created to patch security vulnerabilities in programs. The odds are usually good that the update is made to protect against an attack that has already been detected. By updating and closing old holes, you are decreasing the number of known problems that attackers can use to get at you. Cybercriminals depend on the apathy of users regarding software updates to keep their malicious endeavors running. The good news is that most software updates aren't difficult to implement. In fact, many systems even allow for the updates to be managed automatically.

In the same way that keeping your software current helps keep you safe on your computer, keeping your temple recommend current helps keep you spiritually safe. President Howard W. Hunter was known for his emphasis on temple worthiness. He said:

To qualify for the blessings of the temple, each of us must ensure that our lives are in harmony with the teachings of the Church. . . .

You must believe in God the Eternal Father, in his Son Jesus Christ, and in the Holy Ghost. You must believe that this is their sacred and divine work. . . .

You must sustain the General Authorities and local authorities of the Church. . . .

. . . It is a commitment that you will follow the instructions that come from the presiding officers of the Church. Likewise you should feel loyalty toward the bishop and stake president and other Church leaders. . . .

You must be morally clean to enter into the holy temple. . . .

You must ensure that there is nothing in your relationship with family members that is out of harmony with the teachings of the Church. . . .

. . . You must be honest in all of your dealings with others. . . . Our basic integrity is at stake when we violate this covenant.

. . . You should strive to do your duty in the Church, attending your sacrament, priesthood, and other meetings. . . . Be active participants in your wards and branches, and be one your leaders can depend on.

. . . You must be a full-tithe payer and live the Word of Wisdom. . . . Observation over many years has shown that those who faithfully pay their tithing and observe the Word of Wisdom are usually faithful in all other matters that relate to entering the holy temple.⁸

We can commit now to keeping ourselves safe from spiritual attacks by living so as to be able to keep a current temple recommend.

Back Up Your Files

There is a devious new type of computer attack called ransomware. The most notorious version of this is called CryptoLocker. Through an email attachment, a program is installed on your computer that encrypts all of your files. Then you are instructed to pay a ransom to get the key to decrypt your files. So while all the data in your files are still on your computer, you will not be able to access any of them until you pay the ransom. Some victims have indicated that even after paying the ransom, they were still unable to recover their data. It is estimated that CryptoLocker extorted three million dollars from its victims in the first six months of operation.

Far more common situations of data loss are those due to accidental deletion or hardware failure. Probably most of us have experienced that. A good backup plan can protect us. Ideally you will have your files or your data in at least three places: the place where you work on them, a separate storage device, and off-site. Keep your files on your computer, back them up to an external hard drive, and then back them up in a different location. You can even back up your files to a cloud-based account such as Google Drive or Dropbox for free or

for a small fee. It is good to establish a plan for keeping your backup files current.

In a way, computer backups can be compared to keeping a journal—a way of backing up our memories. We have been counseled to keep a journal. For example, President Spencer W. Kimball said:

Your journal is your autobiography, so it should be kept carefully. You are unique, and there may be incidents in your experience that are more noble and praiseworthy in their way than those recorded in any other life. There may be a flash of illumination here and a story of faithfulness there. . . .

. . . Begin today and write in it your goings and comings, your deepest thoughts, your achievements and your failures, your associations and your triumphs, your impressions and your testimonies. Remember, the Savior chastised those who failed to record important events.⁹

He also said, “This is what the Lord has commanded, and those who keep a personal journal are more likely to keep the Lord in remembrance in their daily lives.”¹⁰

President Monson demonstrated the value of his journal keeping when he said:

I would like to share with you just a tiny sampling of the experiences I have had wherein prayers were heard and answered and which, in retrospect, brought blessings into my life as well as the lives of others. My daily journal, kept over all these years, has helped provide some specifics which I most likely would not otherwise be able to recount.¹¹

President Henry B. Eyring placed an emphasis on using journals to document gratitude. He said:

Before I would write, I would ponder this question: “Have I seen the hand of God reaching out to touch us or our children or our family today?” As I kept at it, something began to happen. As I would cast my mind over the day, I would see evidence of what

God had done for one of us that I had not recognized in the busy moments of the day. As that happened, and it happened often, I realized that trying to remember had allowed God to show me what He had done.

More than gratitude began to grow in my heart. Testimony grew. I became ever more certain that our Heavenly Father hears and answers prayers. I felt more gratitude for the softening and refining that come because of the Atonement of the Savior Jesus Christ. And I grew more confident that the Holy Ghost can bring all things to our remembrance—even things we did not notice or pay attention to when they happened. . . .

My point is to urge you to find ways to recognize and remember God’s kindness. It will build our testimonies.¹²

My current and former students may be laughing a little right now because for the past several years I have taken time during each class session for the students, and for myself, to document something for which they are grateful. Then we take some class time to share. Research shows that people who take time to do this are happier, healthier, and smarter. And, as noted by our Church leaders, this practice will bring us closer to the Lord and build our testimonies.

Passwords

Passwords are nearly ubiquitous in today’s computing environment. Unfortunately, several of us may have insecure passwords that leave us vulnerable to hackers and identity theft. In fact, the most common passwords are “123456789” (sometimes only to 6 or 4) and the word *password*.

A tip for better password security is to use unique passwords. This means having a different password for each account rather than reusing a password for multiple accounts. This is important because hackers can get lists of passwords used on websites that have been hacked. Hackers can test those

listed passwords against other accounts and websites.

A related tip is to use strong passwords. This means having longer passwords that include upper- and lowercase letters, numbers, and special characters. These types of passwords take longer for hackers to crack than words that are found in a dictionary. Some suggest using a phrase or a rhyme as a password. One of my passwords is “ain’t nobody gottime for that,” which, ironically, takes a long time to type. But even my children can remember that password. We also joke about using the last eight digits of pi.

If you are like most people, you will have trouble remembering a whole list of unique and strong passwords without writing them down or storing them in a computer file, which can defeat the purpose of having secure passwords. There is a punch line in a comic strip that says, “Through 20 years of effort, we’ve successfully trained everyone to use passwords that are hard for humans to remember, but easy for computers to guess.”¹³

Consequently, most security experts recommend using a password manager, which is software that securely keeps track of all your user accounts and passwords. I recently counted 211 accounts with passwords stored in my password manager. Some of the best password managers are LastPass, 1Password, or Roboform.

I think good password management is like prayer. Sometimes we may find ourselves with casual, short prayers that are essentially the same day after day. But we are spiritually safer when we take the time to have sincere prayer—long, complicated prayers. While simple prayers are a good thing, we periodically need to truly communicate with our Father in Heaven.

Elder David A. Bednar said:

Simply saying prayers is quite a different thing from engaging in meaningful prayer. I expect that all

*of us already know that prayer is essential for our spiritual development and protection. But what we know is not always reflected in what we do. And even though we recognize the importance of prayer, all of us can improve the consistency and efficacy of our personal and family prayers.*¹⁴

President Spencer W. Kimball remarked:

*I find that when I get casual in my relationships with divinity and when it seems that no divine ear is listening and no divine voice is speaking, that I am far, far away. If I immerse myself in the scriptures, the distance narrows and spirituality returns. I find myself loving more intensely those whom I must love with all my heart and mind and strength, and loving them more. I find it easier to abide their counsel.*¹⁵

And what if we feel at times that we can’t do it all? That’s where the Atonement brings us peace. Far better than a password manager, the Atonement makes up for our shortcomings. We receive the blessings of the Atonement when we repent of our sins and keep the commandments.

In the words of Elder Richard G. Scott:

The Redeemer will safely lead you over the most difficult obstacles of life. His laws are absolutely secure anchors of protection that dispel fear and assure success in an otherwise dangerous world. Such a life will certainly provide you peace and happiness.

*True, enduring happiness, with the accompanying strength, courage, and capacity to overcome the greatest difficulties, will come as you center your life in Jesus Christ.*¹⁶

I am grateful for the all-encompassing power of the Atonement, which compensates for our inadequacies and provides us with peace, comfort, and courage.

Conclusion

In summary, for cybersecurity do the following:

- Be attentive to security messages.
- Watch out for phishing emails.
- Keep your software up to date.
- Back up your files.
- Use strong, unique passwords and a password manager.

And for spiritual safety do the following:

- Be in tune with the Holy Ghost.
- Beware of counterfeit happiness.
- Keep a current temple recommend.
- Keep a journal.
- Engage in meaningful prayer.

As we make and keep sacred covenants, we are blessed with power to withstand adversity, resist temptation, and enjoy a fulness of gospel blessings. Elder Neal A. Maxwell taught, “If we will keep our covenants, the covenants will keep us spiritually safe.”¹⁷

President Harold B. Lee said:

The only safety we have as members of this church is to . . . learn to give heed to the words and commandments that the Lord shall give through his prophet. . . . There will be some things that take patience and faith. You may not like what comes. . . . It may contradict your political views. It may contradict your social views. It may interfere with some of your social life. But if you listen to these things, as if from the mouth of the Lord himself, . . . “the gates of hell shall not prevail against you . . . , and the Lord God will disperse the powers of darkness from before you. . . .” (D&C 21:6).¹⁸

Let us be sure that the spiritual foundation for each of us is the rock of our Redeemer, as Helaman taught his sons:

And now, my sons, remember, remember that it is upon the rock of our Redeemer, who is Christ, the Son of God, that ye must build your foundation; that when the devil shall send forth his mighty winds,

yea, his shafts in the whirlwind, yea, when all his hail and his mighty storm shall beat upon you, it shall have no power over you to drag you down to the gulf of misery and endless wo, because of the rock upon which ye are built, which is a sure foundation, a foundation whereon if men build they cannot fall.¹⁹

I testify that we have a loving Heavenly Father who has a plan for us to return to Him. Through obedience we can find happiness, safety, and peace. In the name of Jesus Christ, amen.

Notes

1. JD 13:280.
2. Thomas S. Monson, “Priesthood Power,” *Ensign*, May 2011.
3. Ronald T. Halverson, “Obeying the Whisperings of the Holy Ghost,” Lessons from the New Testament, *Ensign*, August 2007.
4. Moroni 10:5.
5. Dieter F. Uchtdorf, “You Can Do It Now!” *Ensign*, November 2013.
6. James E. Talmage, “A Greeting to the Missionaries,” *Improvement Era* 17, no. 2 (December 1913): 172–73; emphasis in original.
7. D&C 52:14.
8. Howard W. Hunter, “Your Temple Recommend,” *New Era*, April 1995.
9. Spencer W. Kimball, “The Angels May Quote from It,” *New Era*, October 1975.
10. Spencer W. Kimball, “President Kimball Speaks Out on Personal Journals,” *Ensign*, December 1980; see also “We Need a Listening Ear,” *Ensign*, November 1979; Kimball “Listen to the Prophets,” *Ensign*, May 1978.
11. Thomas S. Monson, “Consider the Blessings,” *Ensign*, November 2012.
12. Henry B. Eyring, “O Remember, Remember,” *Ensign*, November 2007.
13. Randall Munroe, “Password Strength,” *xkcd*, xkcd.com/936.
14. David A. Bednar, “Ask in Faith,” *Ensign*, May 2008.

15. Spencer W. Kimball, “What I Hope You Will Teach My Grandchildren and All Others of the Youth of Zion,” address to CES religious educators, Brigham Young University, 11 July 1966, 4, si.lds.org/library/talks/addresses-to-religious-educators/what-i-hope-you-will-teach-my-grandchildren-and-all-others-of-the-youth-of-zion?lang=eng.

16. Richard G. Scott, “The Atonement Can Secure Your Peace and Happiness,” *Ensign*, November 2006.

17. Neal A. Maxwell, “Overcome . . . Even As I Also Overcame,” *Ensign*, May 1987.

18. Harold B. Lee, *CR*, October 1970, 152; quoted in *Teachings of Presidents of the Church: Harold B. Lee* (Salt Lake City: The Church of Jesus Christ of Latter-day Saints, 2000), 84–85.

19. Helaman 5:12.