

From Efficiency to Agency: Integrating Self-determination Theory and Catholic Anthropology in an Automated Culture

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Abstract

Artificial intelligence and automation are increasingly shaping how people work, make decisions and relate to one another, raising questions about human agency in a culture increasingly shaped by efficiency. These questions are examined through the lens of self-determination theory (SDT) and the Catholic perspectives of *Antiqua et Nova* and *Magnifica Humanitas*. SDT identifies autonomy, competence and relatedness as basic psychological needs that support self-directed action and well-being. *Antiqua et Nova* complements this perspective by emphasising human intelligence, moral responsibility and the limits of delegating decisions to technology. At the same time, *Magnifica Humanitas* situates technological development within a broader understanding of human dignity, freedom, relationships, and the common good. This article argues that Christian formation can help people to preserve basic psychological needs in an automated culture. In this way, formation can support human agency and contribute to human flourishing beyond efficiency alone.

Keywords: human agency, self-determination theory, psychological autonomy, Catholic anthropology, artificial intelligence

Introduction

Artificial intelligence (AI) and automation are becoming part of everyday human life, by shaping people's work, communication, decision-making and relationships with others. There is no doubt that technologies can increase efficiency, extend human capabilities, and

reduce routine hardships. At the same time, their growing influence also raises questions about human agency. When decisions are increasingly predicted, recommended, or performed by automated systems, people may gradually shift from active participation to passive dependence. Research on automation and human-technology interaction suggests that technological systems can influence people's sense of control and agency, particularly when responsibility and decision-making are increasingly delegated to automated processes (Berberian et al., 2012; Bennett et al., 2023). Therefore, the question is not simply whether technology is beneficial or harmful, but how technological environments influence the psychological and moral conditions by which persons exercise their freedom.

Self-determination theory (SDT), a psychological framework for human motivation and well-being, provides a useful framework for examining these conditions. Developed by Deci and Ryan, SDT proposes that human flourishing and continuous motivation are supported by the satisfaction of three basic psychological needs: autonomy, competence and relatedness (Deci & Ryan, 2000; Ryan & Deci, 2000). These needs mean experiencing volition in action, developing effectiveness and capability, and experiencing meaningful connection with others. The environment becomes the decisive factor in whether these needs are supported or crushed. (Chen et al., 2015; Vansteenkiste & Ryan, 2013). When applied to technology, this structure influences whether automated systems support human abilities or reduce human agency. Systems designed mainly for efficiency can limit opportunities for people to make their own decisions, develop skills, take responsibility, and build genuine relationships. (Raees et al., 2024).

Such a psychological perspective enters into dialogue with the Catholic understanding of the human person, as found especially in *Antiqua et Nova*, a Vatican document on human and artificial intelligence, and *Magnifica Humanitas*, Pope Leo XIV's encyclical on safeguarding the human person in the age of artificial intelligence. *Antiqua et Nova* highlights the unique nature of human intelligence, freedom and moral responsibility. At the same time, *Magnifica Humanitas* situates artificial intelligence within a broader reflection on human dignity, technology, work, freedom, relationships, and the common good (DDF & DCE, 2025; Leo XIV, 2026). Both perspectives raise an important question for Christian formation: what kind of person is being formed through increasing dependence on automated systems? Protecting

human agency means not only having the freedom to choose but also developing intrinsic motivation, competence, responsibility, genuine relationships and acceptance of human limitations. From this perspective, technology can help people thrive without defining their value. Hence, Christian formation can help people use technology without giving up the freedom, responsibility, relationships and openness to transcendence that are essential for human flourishing.

Human Agency in an Automated Culture

Human agency refers to a person's capacity to act intentionally, make choices and influence the course of events through personal action (Bandura, 2001). It involves not only performing an action but also experiencing oneself as an active participant in that action. In an automated culture, this experience of agency can change as technology increasingly takes over tasks that were once performed directly by people. Research on automation provides an important starting point. Greater automation can affect people's sense of control over their actions, even when it improves their performance (Berberian et al., 2012).

The issue becomes more complex when automated systems do not merely perform tasks but also recommend, predict and influence decisions. Such systems can shape what people see, consider and prioritise. At the same time, technological assistance does not necessarily reduce agency. AI can support human decision-making and extend human capabilities when people remain meaningfully involved in the process (de Vreede et al., 2021). The concern, therefore, is not automation itself but the possibility that people may gradually rely on automated directions without sufficiently exercising their own judgment and responsibility.

Agency and autonomy are closely related but are not identical. Agency refers more broadly to the capacity to act deliberately and influence one's circumstances, whereas autonomy concerns the experience of acting with a sense of volition and personal authorisation (Bennett et al., 2023; Ryan & Deci, 2020). This distinction is important in an automated culture. A person may remain active while ever more depending on automated recommendations. In such cases, the person continues to act but may have less personal involvement in carrying out those actions. Research on automation bias also shows that people may accept automated recommendations even when they are incorrect, especially when they place high trust in the system or when the task is

difficult (Goddard et al., 2012; Grimmelikhuijsen et al., 2022). These insights highlight the importance of maintaining active human judgment when technology is involved in decision-making.

From Efficiency to Agency: The Psychological Foundations of Human Motivation

Automation is often valued for its speed, accuracy, productivity and efficiency. These qualities can be useful, but human flourishing cannot be measured by efficiency alone. What also matters is whether people remain motivated, capable of making meaningful choices, develop their abilities, and maintain meaningful relationships. SDT provides a useful framework to examine these conditions (Deci & Ryan, 2000; Ryan & Deci, 2020).

Autonomy and Self-directed Action

Within SDT, autonomy refers to the experience of acting with a sense of choice and personal authorisation. It does not mean independence from others, nor does it indicate that every action must be entirely self-generated. Autonomous action occurs when people experience their actions as consistent with values and intentions that they personally accept (Deci & Ryan, 2000). Autonomy is therefore closely related to the quality of motivation. When people experience greater autonomy, they are more likely to act out of genuine interest or from values they have personally accepted (Ryan & Deci, 2000).

This distinction is important in an automated culture. Technology may make decisions easier without necessarily increasing autonomy. Recommendations, prompts and predetermined options can reduce effort while also influencing how people make choices. The key question is whether technology supports meaningful choice or encourages dependence on external direction. Research shows that greater automation can affect people's sense of control even when it improves performance (Berberian et al., 2012). From an SDT perspective, technology is most supportive when it allows meaningful human participation and personal choice.

Competence and Meaningful Participation

Competence is the second basic psychological need identified by SDT. It refers to the experience of being able to interact effectively with one's environment and develop one's abilities through engagement and activity (Deci & Ryan, 2000). So here, competence is not only about achieving successful outcomes but also about experiencing oneself as

capable of learning, responding to challenges, and making an effective contribution. Research across different cultures shows that satisfying the need for competence supports positive functioning, while its frustration can harm psychological well-being (Chen et al., 2015).

Automation can support competence by reducing repetitive tasks and providing information and decision support. However, it can also weaken competence when it takes over tasks that require people to think, practise and develop their abilities. Research suggests that over-reliance on automated systems may reduce opportunities to develop human skills, even when performance improves (Ferdman, 2025). At the same time, AI can support learning and skill development when it is designed as a supportive aid that augments rather than replaces human judgment (Raees et al., 2024). Technology strengthens human skills only when it helps us participate, not when it takes our place. Thus, the concern is not automation itself but how it is integrated into human activity.

Relatedness and Human Connection

Relatedness, the third basic psychological need in SDT, refers to feeling connected, cared for and valued through meaningful relationships, rather than through social contact alone (Ryan & Deci, 2000). Digital technologies can support relatedness by helping people maintain relationships across distance and providing social support (Latikka et al., 2026). In education, technology-based collaboration and AI learning tools can also support students' sense of belonging and engagement when used as aids rather than replacements for human interaction (Pan et al., 2025). Relational AI may also provide companionship and help reduce loneliness in some situations (Irias et al., 2026).

However, AI-mediated dealings also increase concerns. AI can feign empathy and responsiveness, but it does not offer the mutual human relationship found in genuine interpersonal interaction. Frequent reliance on artificial interaction may therefore reduce opportunities for authentic human connection and influence people's expectations of relationships (Irias et al., 2026). From an SDT perspective, technology supports relatedness when it strengthens human relationships, but may frustrate it when artificial interaction begins to replace genuine human connection.

From Psychological Needs to Intrinsic Motivation

The satisfaction of autonomy, competence and relatedness influences the quality of human motivation. SDT distinguishes intrinsic motivation, in which people engage in an activity because they find it interesting or satisfying, from motivation driven mainly by external rewards, pressures or expectations (Ryan & Deci, 2020). External motivation can also become more self-determined when people gradually come to accept the values underlying their actions as their own (Deci & Ryan, 2000). This distinction is important in an automated culture because completing a task more efficiently does not undoubtedly mean that a person is more involved in or has greater ownership of the activity.

Technology can support human flourishing when it helps people participate actively in activities they understand and value. Research on automation suggests that improved performance does not always lead to a stronger sense of control or agency (Berberian et al., 2012). Consequently, SDT helps us ask whether technology supports meaningful participation and personal motivation, rather than efficiency alone. However, it does not fully explain human freedom, responsibility and transcendence. These wider questions are explored through a dialogue with *Antiqua et Nova* and *Magnifica Humanitas*.

Human Agency: A Dialogue with Antiqua et Nova and Magnifica Humanitas

The psychological account of agency offered by SDT provides an important starting point, but human freedom cannot be reduced to psychological autonomy. A person may experience choice and competence while still facing deeper questions about truth, responsibility, purpose and the good. Catholic anthropology places these questions within a broader understanding of the human person as a free and responsible subject. In the context of artificial intelligence, *Antiqua et Nova* and *Magnifica Humanitas* offer complementary perspectives for deepening this understanding.

From Psychological Autonomy to Theological Freedom

While SDT understands psychological autonomy as acting with a sense of volition and personal endorsement (Deci & Ryan, 2000; Ryan & Deci, 2020), Catholic theological anthropology understands human freedom in relation to truth and the good. Autonomy explains how a person experiences and directs their actions, but it does not determine

whether a choice is morally good or responsible. Catholic teaching connects human dignity and freedom with conscience, through which the person seeks and responds to what is true and good (Paul VI, 1965, 16-17). Human freedom, therefore, is more than the ability to choose; it includes the capacity to choose responsibly in relation to truth, goodness and the purpose of human life.

Such a distinction becomes important in an automated culture. A person may freely accept an AI recommendation, but a voluntary choice is not necessarily a wise or morally responsible one. Automated systems can make decisions easier and faster, but they may also reduce the space for reflection and personal judgment when their recommendations are accepted without sufficient examination. *Antiqua et Nova* stresses that AI cannot replace the human capacity for moral judgement and discernment, since these belong to the human person (DDF & DCE, 2025, 28–30, 39–43). Thus, the person remains responsible for how technological assistance is understood and used.

Magnifica Humanitas adds a broader concern by warning against forms of technological development that can influence human choices and place efficiency or technical power above the dignity of the person (Leo XIV, 2026, 52-55). The movement from psychological autonomy to theological freedom, therefore, does not reject the insights of SDT. Rather, it places psychological self-direction within a broader understanding of freedom that encompasses truth, moral responsibility, and human dignity. These awarenesses provide the basis for a closer examination of the relationship between human intelligence, AI, and moral responsibility.

Human Intelligence and Moral Responsibility

Antiqua et Nova provides an important bridge between psychological and theological perspectives on human agency. It distinguishes human intelligence from artificial intelligence and emphasises that human intelligence is rooted in embodied experience, relationships, moral responsibility and the search for meaning. AI may assist human reasoning, but it cannot assume the moral responsibility of the human person. (DDF & DCE, 2025, 39-40). When AI is used in decision-making, responsibility remains with the person who evaluates, accepts, modifies or rejects its output. The document also cautions against excessive dependence on AI and stresses that accountability must remain with human decision-makers (DDF & DCE, 2025, 39-40, 44-46).

This dynamic also raises the psychological problem of automation bias, understood as the tendency to rely too heavily on automated advice in decision-making. Research shows that people may change correct decisions in response to incorrect automated recommendations, with factors such as trust, confidence and task difficulty influencing this tendency (Goddard et al., 2012). More recent research also identifies automation bias as a form of overreliance on algorithmic advice, although it varies across contexts of human-AI interaction (Grimmelikhuijsen et al., 2022). So, excessive reliance on AI can reduce active judgment and weaken personal responsibility.

Magnifica Humanitas extends this concern from personal responsibility to shared responsibility. Pope Leo XIV urges strong accountability throughout the development and use of AI, including for those who design, develop, and use technological systems (Leo XIV, 2026, 105-107). He also calls for shared responsibility among institutions, businesses, educational communities and citizens so that technological development helps the common good (Leo XIV, 2026, 181). This understanding complements SDT's emphasis on autonomy and competence: people need both the capacity to use technology and the freedom, judgement, and responsibility to direct its use simultaneously. Thus, human agency in an automated culture depends on both responsible persons and social environments that support responsible participation.

From Technological Efficiency to Human Dignity

Antiqua et Nova and *Magnifica Humanitas* both question approaches to technology that place technical performance above the human person. *Antiqua et Nova* distinguishes artificial intelligence from human intelligence and emphasises that AI must remain a tool serving human purposes rather than being treated as equal to human intelligence (DDF & DCE, 2025, 28–40). Pope Leo XIV develops this concern in *Magnifica Humanitas* by warning against a view of technology in which efficiency, productivity, profit or technical power become the main measures of progress (Leo XIV, 2026, 92, 129, 150). Thus, True progress depends on whether technology genuinely assists the good of the human person rather than making the person inferior to the system.

This concern connects closely with SDT. A technological system may improve performance while reducing opportunities for personal judgement, meaningful participation and the development of human

abilities. From an SDT perspective, efficiency alone does not show whether a technological environment supports autonomy and competence (Ryan & Deci, 2000). From a Catholic perspective, the deeper question is whether technology protects human dignity and supports human growth or reduces people to what they can produce. Pope Leo XIV, in *Magnifica Humanitas*, places human dignity and the common good at the centre of technological development (Leo XIV, 2026, 51, 59, 80). When technology prioritises output over the person, it can weaken the human agency needed for personal and spiritual growth.

The dialogue between these two documents, therefore, moves the focus from what technology can do to what it does for the human person. AI may exceed human abilities in processing speed and efficiency, but it cannot reach the degree of human worth or replace the capacities that belong to human beings. In this light, SDT's focus on autonomy, competence, and relatedness is situated within a broader understanding of human dignity, in which technology supports meaningful participation and personal growth. Technology fulfils its proper purpose when it remains a servant of the human person rather than becoming its master.

Spiritual Freedom in an Automated Culture

Spiritual freedom takes the discussion from psychological autonomy and moral responsibility to the deeper direction of human life. In Catholic understanding, freedom is not simply the ability to choose without external control. It is the capacity to choose what is true and good and to direct one's life towards God, the highest good (CCC, 1997, 1731-1733). Jesus connects freedom with truth: "the truth will set you free" (cf. John 8:32), while St Paul connects freedom with love and service of others (cf. Gal. 5:13). *Antiqua et Nova* adds that human beings can listen to their conscience, use good judgement and discern what is right, which AI cannot replace (DDF & DCE, 2025, 39-43). Hence, spiritual freedom includes the inner ability to pause, reflect, and choose in light of truth, goodness, and one's relationship with God.

This interior freedom can be challenged in an automated culture. Digital technologies can constantly shape attention, desires and choices through personalised content, recommendations and other forms of automated influence. *Magnifica Humanitas* warns that profiling, predicting and directing human behaviour can become a new form of power that may weaken interior freedom (Leo XIV, 2026, 171). The

concern is not technology itself, but the possibility that constant digital stimulation and dependence on automated guidance may leave less space for silence, reflection and discernment. A person may continue to make choices while becoming less aware of why those choices are made and where they are leading.

The above discussion adds depth to SDT's understanding of autonomy. SDT asks whether people experience their actions as self-directed rather than controlled by external pressures (Deci & Ryan, 2000). Catholic spirituality asks a further question: what is this freedom directed towards? Spiritual freedom involves remaining able to step back from immediate desires and external influences, listen inwardly, discern what is good and remain open to God. Ultimately, psychological autonomy can grow into a deeper freedom to choose truth, goodness and love in an automated culture.

Christian Formation for Human Agency in an Automated Culture

The dialogue between SDT and Catholic anthropology points towards a formative response to an increasingly automated culture. If technological environments can support or frustrate autonomy, competence, and relatedness, Christian formation can help persons develop the inner and relational capacities required to engage with technology without becoming dependent on it. The aim is not to resist technological development but to encourage people to use technological tools while maintaining freedom, responsibility, discernment, and openness to others.

Cultivating Interior Freedom and Discernment

Christian formation gives an important place to interiority because responsible freedom requires the ability to pause, reflect and examine one's thoughts, desires and intentions. Scripture expresses this through the call to "guard your heart" (cf. Prov. 4:23) and remain spiritually vigilant (cf. 1 Pet. 5:8). The *Catechism of the Catholic Church* similarly connects mature Christian life with purity of heart, discretion and the careful formation of conscience (CCC, 1997, 1783-1785, 2520). It also calls believers to spiritual vigilance in prayer, especially in the face of distraction (CCC, 1997, 2730). Thus, interiority is not limited to prayer alone. It helps people to become aware of what influences them, scrutinise their desires and make responsible choices in everyday life. In an automated culture, this capacity becomes especially important when digital systems continually present

information, recommendations and prompts that can shape attention and behaviour.

Cognitive psychology provides useful support for this formative insight. Research on cognitive friction suggests that deliberately introducing a pause before accepting an automated recommendation can encourage more careful judgment (Cox et al., 2016). Kahneman's distinction between rapid and automatic System 1 thinking and slower, more deliberate System 2 thinking also highlights the value of creating space for reflection (Kahneman, 2014). These insights help to explain why practices of attention, silence and reflection can be valuable in technology-mediated environments. In this sense, Christian formation can encourage people not to respond immediately to every digital prompt, recommendation or stimulus, but to pause and consider what they are receiving and how they should respond.

This interior capacity also supports the exercise of human agency described earlier in the article. *Magnifica Humanitas* warns that profiling, prediction and the direction of behaviour through digital systems can become a form of technological power that threatens interior freedom (Leo XIV, 2026, 171). *Antiqua et Nova* likewise reminds us that responsibility for decisions made with AI remains with the human person and warns against excessive dependence on such systems (DDF & DCE, 2025, 44-46). So, Christian formation can help persons develop a habit of interior discernment that extends from prayer into ordinary decisions, relationships, work and digital life. This awareness also deepens SDT's understanding of autonomy: freedom is not only about making a choice, but also about understanding why we choose and where our choices lead us. (Ryan & Deci, 2000).

Developing Competence through Human Limitation and Discernment

AI can provide quick answers and perform many tasks efficiently. However, learning and human development often require time, effort and struggle. Christian faith does not view human limitation as merely a weakness to be removed. St Paul reminds us that God's grace can work through human weakness: "My grace is sufficient for you, for power is made perfect in weakness" (cf. 2 Cor. 12:9). The search for truth is a personal journey that requires effort, reflection and commitment (John Paul II, 1998, 24, 42). *Magnifica Humanitas* similarly highlights the value of human limitation and warns against

treating every human limitation as something technology must overcome (Leo XIV, 2026, 118).

Addressing human limits is especially important in education and formation. When AI provides an immediate answer to every question, people may have fewer opportunities to think through a problem, make mistakes, learn from them, and develop their own insights. Research on productive failure shows that struggling with a problem before receiving the correct answer can support deeper learning (Kapur, 2016). Hence, Pope Leo XIV stresses the importance of keeping alive the desire to ask questions and seek truth rather than allowing technology to make human thinking pointless (Leo XIV, 2026, 140, 147). The aim is not to make learning difficult for its own sake, but to ensure that technology does not remove the effort needed for genuine learning.

Therefore, Christian formation encourages people to accept limitations, struggles and uncertainties as part of human growth. Instead of trying to remove every difficulty through technology, people can learn to use AI as a helpful tool while continuing to think, question, practise and make their own judgements, which eventually leads to responsible competence: being able to use technology well while recognising its limits and remaining capable of independent thought and responsible action.

Preserving Human Relatedness and Authentic Communion

Digital technology can facilitate communication and offer new ways to stay connected with others. Recent research shows that interaction with AI and other smart technologies can contribute to people's experience of digital relatedness, especially when offline social connections are limited (Latikka et al., 2026). At the same time, research on relational AI points to both its potential to reduce loneliness and the possibility of emotional dependence on artificial companions (Irias et al., 2026). These findings suggest that technology can support relatedness, but digital connection is not the same as a genuine human relationship.

From a Christian perspective, genuine communion involves more than feeling connected. It includes mutual care, presence, vulnerability and responsibility. *Magnifica Humanitas* warns against technological developments that may weaken the desire for genuine human encounter and relationship (Leo XIV, 2026, 114, 126). Pope Francis similarly emphasises openness to others, attentive listening and

genuine encounter as essential for fraternity (Francis, 2020, 42–43, 87–94). This understanding is rooted in the Christian view of the human person as created in the image of God and called to relationships of love and self-giving (cf. Gen. 1:27; *Gaudium et spes*, 1965, 24). Christian formation can therefore help people distinguish between being connected and being truly related, while cultivating presence, listening, empathy, service and responsibility. Technology may support these relationships, but it should not become their substitute.

Such a perspective also deepens the SDT understanding of relatedness. SDT identifies meaningful connection, care and belonging as basic psychological needs that support human well-being (Ryan & Deci, 2000). Christian formation fosters a broader understanding of communion, in which the other is encountered not simply as a source of information, attention, or emotional support, but as a person worthy of respect and care. Technology can, therefore, remain a useful means of communication while authentic human communion remains the deeper goal.

Conclusion

The conversation between SDT and Catholic anthropology shows that human agency in an automated culture cannot be measured only by speed, efficiency, or technical output. SDT helps us understand the psychological needs that support self-directed action through autonomy, competence, and relatedness. The Catholic tradition deepens these empirical insights by placing human needs within a broader understanding of dignity, moral freedom, personal responsibility, and spiritual life. While technology can expand human abilities and make daily tasks easier, it cannot discern truth, choose moral values, or decide who a person should become. In the end, genuine human agency means remaining actively involved in what we do through thoughtful choice, personal accountability and moral reflection.

This perspective offers important guidance for Christian formation in an increasingly automated world. Formation must help people to develop interior freedom and moral discernment, enabling them to learn and make decisions without becoming overly dependent on algorithmic answers. It invites us to recognise our human limits and to remember that efficiency is never the true measure of human worth. The goal is neither to reject modern technology nor to accept it without question, but to use it wisely while protecting the human capacities that

technology should serve rather than replace. By shifting our focus from technical efficiency to human agency, Christian formation helps people remain free, responsible, relational, and open to truth so that technology serves human flourishing rather than directing human life.

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