

# Caritas e veritas

**Journal for Christian reflections in the context of social sciences and humanities**  
**Časopis pro reflexi křesťanských souvislostí v sociálních a humanitních oborech**

**Artificial Intelligence as a Challenge  
for Spiritual-theological Reflection in the Context  
of the Encyclicals Laudato si' and Fratelli tutti**

Michal Černý

**The Word without a Speaker? Scripture, Its Meaning,  
and the Challenge of Large Language Models**

Jiří Dosoudil

**The Anthropological Turn Towards Dialogue  
in the Age of Generative AI**

Milan Urbančok, Jozef Žuffa, Lucia Malíčková

**Artificial Intelligence and Social Diversity:  
Demographic Aspects and Security Challenges**

Ivana Olecká, Josef Smolík

**Artificial Intelligence in Psychotherapy:  
experiences of Aftercare Programme Clients**

Kristýna Hellerová, David Urban, Jana Hamhalterová

**Payment Cards and Consumerism in the Age of AI:  
towards a Mediation Account**

Ehsan Arzroomchilar, Daniel D. Novotný

Teologická fakulta  
Jihočeské univerzity v Českých Budějovicích  
Faculty of Theology  
University of South Bohemia, České Budějovice

číslo **1** / ročník 16  
rok 2026

# Contents

## Editorial ..... 6

## Studies

**Artificial Intelligence as a Challenge  
for Spiritual-theological Reflection in the Context  
of the Encyclicals Laudato si' and Fratelli tutti..... 18**

Michal Černý

**The Word without a Speaker? Scripture, Its Meaning,  
and the Challenge of Large Language Models ..... 33**

Jiří Dosoudil

**The Anthropological Turn Towards Dialogue  
in the Age of Generative AI ..... 45**

Milan Urbančok, Jozef Žuffa, Lucia Malíčková

**Artificial Intelligence and Social Diversity:  
Demographic Aspects and Security Challenges ..... 56**

Ivana Olecká, Josef Smolík

**Artificial Intelligence in Psychotherapy:  
experiences of Aftercare Programme Clients ..... 76**

Kristýna Hellerová, David Urban, Jana Hamhalterová

**Payment Cards and Consumerism in the Age of AI:  
towards a Mediation Account..... 88**

Ehsan Arzroomchilar, Daniel D. Novotný

**Technological Hegemony in the Global South:  
epistemicide, Dehumanisation and Digital  
Domination ..... 103**

Chileshe Mulenga Nicholas, David Mutemwa

# Obsah

<b>Editorial</b>	.....	<b>4</b>
<b>Rozhovor</b>	<b>Rozhovor s Jurajem Hvoreckým o umělé inteligenci, obavách z jejího rozvoje, náboženství a pečovatelských robotech .....</b>	<b>14</b>
<b>Recenze</b>	.....	<b>117</b>

# Editorial

## 1/2026 Umělá inteligence a transformace společnosti - zamyšlení nad současnými perspektivami a budoucími výzvami pro společenské a humanitní vědy

Historie lidské civilizace je v mnoha ohledech příběhem přizpůsobování se proměnlivým podmínkám: klimatickým a environmentálním výkyvům, epidemiím i objevům nových materiálů a technologií. Každá z těchto transformací přetvořila lidský život způsobem, který je zároveň osvobozující i znepokojivý. Platí to pro přechod k zemědělství a pastevectví, stejně jako pro zvládnutí metalurgie, využití nových zdrojů energie či ovládnutí výroby čtyř základních materiálů, na nichž (jak popisuje v řadě svých knih Václav Smil) spočívá současná civilizace: oceli, čpavku, betonu a plastů. V současnosti, charakterizované zrychlujícím se tempem změn, probíhá další transformace: digitální revoluce, stále více umocňovaná umělou inteligencí. Téměř každý aspekt současného života je touto revolucí formován. Digitální technologie se staly všudypřítomnými. Proměňují výzkum, vzdělávání, zdravotnictví, zábavu, finance, vojenské konflikty, a dokonce i náboženství. Tyto technologie ovšem nejsou pouhé neutrální nástroje: aktivně formují a zprostředkovávají to, jak jednotlivci a společnosti chápou smysl svého života, a u věřících lidí i to, jak praktikují svou víru. Jak ukázalo jedno z předchozích čísel časopisu *Caritas et veritas* (1/2021) v souvislosti s pandemií covidu-19, situace náhlé krize mají tendenci odhalovat jak křehkost zavedených společenských řádů, tak odolnost lidského ducha. V takových chvílích jsou společenské vědy, humanitní obory, pomáhající profese a filozofie, tedy disciplíny, které se nejvíce zabývají lidskou důstojností, smyslem života a jeho naplněním (*well-being*), povolány ke své odvěké úloze: k reflexi nad otázkou, co se od nás vyžaduje právě v tomto historickém okamžiku. Tento reflexivní úkol nelze svěřit žádné specializované odborné oblasti. Podmínky, kterým čelíme, vyžadují transdisciplinární formy bádání a obnovenou pozornost věnovanou formování úsudku a charakteru, v souladu s neoaristotelovským náhledem, že odpovědné individuální a kolektivní jednání závisí spíše na kultivovaných intelektuálních a morálních ctnostech než jen na samotných technicko-vědeckých metodikách. To, co je zapotřebí, je v klasickém pojetí *phronesis* (φρόνησις), forma praktické moudrosti, která umožňuje zdravý úsudek v podmínkách nejistoty a složitosti. Doufáme, že toto speciální monotematické číslo poslouží alespoň jako malý příspěvek k této důležité reflexi. Začínáme třemi příspěvky, které čerpají z teologických tradic. Číslo otevírá **Michal Černý**, jehož studie se zabývá dvěma encyklikami papeže Františka (1936–2025) *Laudato si'* a *Fratelli tutti* jako rámcem pro pochopení sociálních a duchovních rizik generativní AI. Církev se technologickými změnami zabývá přinejmenším od konce devatenáctého století. Černý tvrdí, že tak musí učinit znovu a naléhavě a že jak sociální práce, tak spiritualita se promění způsoby, které teprve začínáme mapovat. Jeho příspěvek vymezuje teologické a etické sázky pro následující příspěvky. Od úvah o katolickém magisteriálním učení přecházíme k hermeneutice. **Jiří Dosoudil** se zabývá otázkou, kterou velké jazykové modely (LLM) činí nově naléhavou: může jazyk nést význam bez mluvčího subjektu? Autor se opírá o biblické pojmy *dābār* (דָּבָר) a *logos* (λόγος) a tvrdí, že skutečnou výzvou umělé inteligence není teologie, nýbrž logocentrismus, a že „Písmo nemusí být chápáno jako úložiště božského záměru“, ale jako událost oslovení a odpovědi. Jinými slovy, mohli bychom

snad říci, že biblické Slovo není pouhými „daty“. **Milan Urbančok, Jozef Žuffa a Lucia Malíčková** se ptají, co teologický výzkum vyžaduje. Jejich článek sleduje, jak použití LLM v teologickém bádání mění formulaci výzkumných otázek a interpretačních postupů. Na základě své interdisciplinární práce v Národním superpočítačovém centru na Slovensku obhajují metodologický rámec založený na dialogické hermeneutice, který považuje odpovědnost lidského interpreta za klíčovou. Další tři příspěvky mají spíše empirický charakter a/nebo se zabývají empirickým výzkumem.

**Ivana Olecká a Josef Smolík** představují výsledky reprezentativního průzkumu mezi 521 českými respondenty zaměřeného na vzorce využívání umělé inteligence, rozčleněného podle věku, pohlaví a vzdělání, který byl proveden v roce 2024. Jejich zjištění jsou pravděpodobně poněkud překvapivá. Každodenní využívání AI zůstává vzácné. Dominují překladatelské nástroje, zatímco generování obrazů a další typy AI zůstávají okrajové. S přijetím AI koreluje spíše věk a vzdělání než pohlaví. Autoři také diskutují o AI v souvislosti s mis/dezinformacemi, ochranou soukromí a o nerovnoměrném rozložení benefitů AI. **Kristýna Hellerová, David Urban a Jana Hamhalterová** se zabývají klienty v následné péči při léčbě závislostí, což je populace, o které se v debatách o etice AI zřídka hovoří. Prostřednictvím tematické analýzy písemných odpovědí od pěti klientů autoři identifikují schopnost AI poskytovat emoční dostupnost a kognitivní strukturování spolu s hlubokou ambivalencí ohledně autenticity vztahů a ochrany osobních údajů. AI může doplňovat psychosociální péči, nemůže však nahradit terapeutický vztah. Od terapie se následně přesuneme k chování spotřebitelů. **Ehsan Arzroomchilar a Daniel Novotný** se ve svém příspěvku z oblasti aplikované filosofie věnují platebním kartám a konzumerismu, a to především z hlediska postfenomenologické teorie mediace. Platební karty jsou zdánlivě všední nástroje k usnadnění finančních transakcí. Při bližším pohledu ale vidíme, že aktivně formují naše sebepojetí, podněcují konzumerismus a mohou dokonce přispívat k chorobnému, kompulzivnímu nakupování (shopaholismu, oniománii). Tento článek ukazuje, jak účinky technologií vždy přesahují záměry jejich tvůrců. Jedná se o dynamiku, která se stává stále viditelnější s nástupem stále sofistikovanějších a všudypřítomných smart nástrojů, které náš žitý, přirozený svět (*Lebenswelt*) rozpouštějí do všeobjímajícího internetu věcí. V posledním tematickém příspěvku překročíme hranice evropských a západních perspektiv. **Chile-she Mulenga a David Mutemwa** zasazují digitální technologii do kontextu globálních mocenských závislostí a asymetrií. Západní platformy, jako jsou Google a Wikipedia, systematicky upřednostňují určité epistemologie a zároveň rozrušují domorodé systémy znalostí. To lze popsat jako formu „technologické epistemicidy“. Na základě afrických filozofických postřehů o vztahovosti a konceptu „technopoly“, který vyvinul Neil Postman, volají autoři příspěvku po kontextově citlivém přístupu k technologizaci globálního Jihu.

Toto číslo uzavírá recenze, která se tématu umělé inteligence vůbec nevěnuje, což je osvěžující připomínka toho, že ne vše dosud padlo pod vliv této technologie. **Jan Hábl** nahlíží na duchovní portrét Karla Kryla od Pavla Hoška z perspektivy pedagogiky. Příspěvky shromážděné v tomto čísle zahrnují teologii, filosofii, sociologii, klinickou praxi i další obory. Neshodují se ve všech detailech, sdílejí však společné přesvědčení: že měřítkem každé technologie je to, co činí s lidskou osobou a se společností. Toto měřítko podle našeho názoru není nikdy pouze technické a nelze je svěřit jediné disciplíně ani pouze tvůrcům veřejných politik. Vyžaduje zkoumání, které je široce lidské, transdisciplinární a v posledku filosofické. Pozoruhodnou shodou okolností právě v době dokončování tohoto čísla vydal papež Lev XIV. svou první encykliku *Magnifica Humanitas: O ochraně lidské osoby v době umělé inteligence*. Jde o skutečně příhodné potvrzení aktuálnosti tohoto tematického čísla.

Za celý redakční kolektiv Vám přejeme inspirativní čtení.

**Daniel D. Novotný, Chileshe Mulenga**  
(koeditoři čísla)

# Editorial

## 1/2026 Artificial Intelligence and the Transformation of Society – reflection on current perspectives and future challenges for the social sciences and humanities

The history of human civilisation is, in many respects, a history of adaptation to changing conditions such as climate and environmental shifts, epidemics, and the discovery and invention of new materials and technologies. Whether in the form of agriculture, pastoralism, metallurgy, new sources of energy, or the processes that have produced the materials upon which contemporary civilisation rests, namely ammonia, cement, plastics, and steel, as emphasised by Václav Smil, each transformation has reshaped human life in ways that are at once liberating and unsettling. In our own time, marked by an accelerating pace of change, another transformation is underway: the digital revolution, increasingly enhanced by artificial intelligence. Nearly every aspect of contemporary life is now shaped by it. Digital technologies have become ubiquitous, transforming fields such as research, education, healthcare, entertainment, finance, military conflicts, and even religion. These technologies are not neutral; they actively shape and mediate how individuals and communities understand the meaning of their lives and, for those who are religious, how they practice their faith. As one of the previous issues of *Caritas et Veritas* (1/2021) indicated in the context of the COVID-19 pandemic, moments of sudden collective disruption tend to reveal both the fragility of established social orders and the resilience of the human spirit. In such moments, the social sciences, the humanities, the helping professions, and philosophy, disciplines most directly concerned with human dignity, meaning, and well-being, are called to do what they have always done: to reflect and to ask what is required of us at this point in history. This task cannot be entrusted to any single field of expertise. The conditions we face call for genuinely transdisciplinary forms of inquiry and for renewed attention to the formation of judgment and character, in line with a Neo-Aristotelian insight that responsible individual and collective action depends on cultivated intellectual and moral virtues rather than on techno-scientific knowledge alone. What is required, in classical terms, is *phronesis* (φρόνησις), a form of practical wisdom that enables sound judgment under conditions of uncertainty and complexity. Hence this special monothematic issue as a small contribution to this important reflection. We begin with three contributions that draw on theological traditions.

The issue opens with **Michal Černý**, whose study deals with two encyclicals of Pope Francis (1936-2025), *Laudato si'* and *Fratelli tutti*, as a framework for understanding the social and spiritual risks of generative AI. The Church has engaged with technological change at least since the late nineteenth century; Černý argues that it must do so again, and urgently, and that both social work and spirituality will be transformed in ways we are only beginning to map. His contribution sets the theological and ethical stakes for the contributions that follow. From reflections on Catholic magisterial teaching, we move to hermeneutics. **Jiří Dosoudil** confronts a question that large language models (LLMs) make newly pressing: can language carry meaning without a speaking subject? Drawing on the biblical concepts of *dābār* (דָּבָר) and *logos* (λόγος), the author argues that the genuine challenge of artificial intelligence is not to theology but to logocentrism, and that 'Scripture need not

be understood as a repository of divine intention, but as an event of address and response. In other words, we could perhaps say, the biblical Word, it is not mere data. **Milan Urbančok**, **Jozef Žuffa**, and **Lucia Malíčková** ask what theological research requires. Their article traces how the use of LLMs in theological scholarship reshapes the formulation of research questions and interpretive operations. Building on their interdisciplinary work at the National Supercomputer Center in Slovakia, they argue for a methodological framework grounded in dialogical hermeneutics, one that treats the human interpreter's responsibility as non-negotiable.

The next three contributions are more empirical in character and/or engaging with empirical research. **Ivana Olecká** and **Josef Smolík** offer publish results of the representative survey of 521 Czech respondents on patterns of AI use, segmented by age, gender, and education and collected in 2024. Their findings are probably somewhat surprising. Daily AI use remains rare. Translation tools dominate, while image generation and automotive AI remain marginal. Age and education, rather than gender, correlate with adoption. The authors also discuss exposure to disinformation, privacy risks, and the unequal distribution of AI's benefits. The same inequalities appear in clinical settings. **Kristýna Hellerová**, **David Urban**, and **Jana Hamhalterová** address aftercare clients in addiction recovery, a population rarely mentioned in AI ethics debates. Through reflexive thematic analysis of written responses from five clients, the authors identify AI's capacity for emotional availability and cognitive structuring alongside a deep ambivalence concerning relational authenticity and data privacy. AI can complement psychosocial care; it cannot, however, replace the therapeutic alliance. From therapy we shift to consumer behaviour. Applied philosophers **Ehsan Arzroomchilar** and **Daniel Novotný** apply postphenomenological theory of technological mediation to the case of payment cards. These seemingly mundane instruments do more than facilitate transactions—they actively shape our self-understanding, fuel consumerism, and can even contribute to compulsive buying disorder. Their analysis serves as a powerful reminder that the effects of technology invariably surpass the intentions of its designers, a dynamic that becomes ever more pervasive as increasingly sophisticated tools dissolve into the all-encompassing Internet of Things. Finally, we broaden the horizon beyond European and Western perspectives. **Chileshe Mulenga Nicholas** and **David Mutemwa** situate digital technology within global power dependencies and asymmetries. Western platforms such as Google and Wikipedia, and their successors, they argue, systematically privilege certain epistemologies while eroding indigenous knowledge systems. This may be described as a form of technological epistemicide. Drawing on African philosophical insights on relationality and the concept of technopoly developed by Neil Postman, they call for a context-sensitive, dignity-affirming approach to technology in the Global South.

This issue closes with a review untouched by the subject of AI, which is a refreshing reminder that not everything has yet fallen under the influence of this technology. **Jan Hábl** explores Pavel Hošek's spiritual portrait of Karel Kryl from the perspective of an educationist. The contributions gathered here span theology, philosophy, sociology, clinical practice, and other disciplines. They do not agree in every detail but share a common conviction: that the measure of any technology lies in what it does to the human person and society. That measure, we believe, is never merely technical and cannot be confined to a single discipline or just to policymakers. It demands an enquiry that is broadly human, trans-disciplinary, and ultimately philosophical. Remarkably, just as this issue was being completed, Pope Leo XIV published his first encyclical, *Magnifica Humanitas: On Safeguarding the Human Person in the Time of AI*. This is a truly fitting affirmation of the timeliness of this special issue.

On behalf of the entire editorial team, we wish you inspiring reading.

**Daniel D. Novotný, Chileshe Mulenga**  
(co-editors of this issue)

## Témata dalších čísel

Pro další čísla CetV byla stanovena následující témata, ke kterým redakce uvítá příspěvky jak v podobě odborných studií, tak i popularizačních článků. O zařazení popularizačního článku rozhoduje redakce, odborná studie podléhá kromě redakčního posuzování i procesu dvojí anonymní recenze. Redakce může odmítnout texty taktéž z případných kapacitních důvodů či nesouladu s profilem časopisu a zaměřením tematického čísla.

**2/2026** Pastorační služba a sociální vědy

**Uzávěrka: 30. 6. 2026**

Texty jsou přijímány pouze v anglickém jazyce.

Pastorace, pastýřská péče, duchovní péče – poimenika či pastorační péče je nedílnou součástí činnosti křesťanských církví od počátků jejich existence a činnosti. Je chápána jako služba věřícím i nevěřícím, víru praktikujícím i neprojektujícím; jako služba, která se dotýká podpory zvládnání náročných situací v životech jednotlivců i skupin či komunit, i mnohem širěji jako „služba světu“, skrze kterou místní komunity křesťanů (farnosti, sbory, obce) podporují lidskou společnost, lidskou důstojnost a lidskou činnost v konkrétních historických, sociálních a geografických podmínkách.

Přitom však není možné označit za pastorační jakoukoliv pomáhající či osvětovou činnost nebo občanské a komunitní angažmá. Nedílnou součástí pastorace a jejím základem je totiž komunikace evangelia, čímž ovšem není myšleno misijní působení a proselytismus. Jedná se spíše o transparentní komunikaci světonázorových a hodnotových východisek při řešení konkrétních problémů současného světa a lidí v něm. Teologicky řečeno, řešení konkrétních problémů lidí ve světě vychází z křesťanské víry, např. při identifikaci toho, co ohrožuje důstojnost člověka stvořeného k Božímu obrazu, a opírá se o křesťanskou etiku, např. při hledání řešení, které se pro daný problém jeví jako dobré a nejlepší na základě biblického étosu.

Pro identifikaci problémů dnešního světa a lidí v něm však disponují svými – často velmi přesnými – nástroji také sociální vědy. Přinášejí velmi užitečné znalosti o povaze takových potíží. Navíc dokáží také predikovat zamýšlené i neplánované dopady různých předpokládaných řešení jednotlivých problémů. V souvislosti s pastorační tak vzniká potenciálně nesnadný a možná i konfliktní prostor setkávání dvou pohledů na svět a jeho povahu, tj. dvou základních epistemologií a jejich teoretických východisek. Pastorace a její teologická východiska se následně při řešení zmíněných problémů často ocitají na „vedlejší koleji“ pro svou faktickou či údajnou analytickou nepřesnost, nižší nebo pomalou účinnost či nejednoznačný vliv a nesnadno měřitelné výsledky.

Číslo 2/2026 se chce zaměřit právě na toto pomezí teologie a sociálních věd, a to ve dvou obecných směrech uvažování: a) možnost využití sociálních věd a zejména jejich epistemologie

v pastoraci a b) prezentace konkrétních výzkumů souvisejících s pastorací. Přijímány tedy budou zejména články zaměřené na:

- výzkum tzv. jednotlivin – tedy konkrétních exemplárních příkladů přístupů k pastoraci využívajících sociálněvědní zjištění či postupy zkoumání světa;
- výzkumné studie či přehledové články zaměřené na dilematické situace reflektované a řešené v kontextu pastorace: Jak se zachází s napětím mezi množstvím a kvalitou poskytovaných podpůrných postupů a intervencí? Jak různě přemýšlejí pastorační pracovníci nad neutralitou nebo favoritismem ve vztahu ke spirituální rovině klientů jejich služeb?;
- výzkumné či teoretické studie zaměřené na zacházení s konceptem pravdy v rámci pastorační péče, a to také ve vztahu k ontologicko-epistemologickým východiskům;
- výzkumné či přehledové statě zaměřené na možná napětí mezi horizontálním (společenským) a vertikálním rozměrem pastorační péče;
- výzkumné či teoretické statě zaměřené na sociálními vědami popisované a uchopitelné jevy pojímané jako znamení času;
- články reflektující princip graduality jako pastoraci sledující teologické cíle a respektující sociálněvědní poznatky o člověku, lidských vztazích a problémech lidí v současném světě;
- výzkumné či teoretické reflexe zaměřené na způsoby využívání sociálněvědních zjištění a výzkumných postupů v pastorační péči s ohledem na jejich ontologicko-epistemologická východiska;
- výzkumné či teoretické reflexe zaměřené na způsoby zacházení s právním kontextem poskytování služeb v rámci pastorace, především ve vztahu k dětem a zákonu o sociálně-právní ochraně dětí, ale také ve vztahu k profesionálnímu tajemství.

**1/2027** Odpovědnost pomáhajících profesí za demokracii

**Uzávěrka: 1. 1. 2027**

Texty jsou přijímány pouze v anglickém jazyce.

Číslo 1/2027 časopisu Caritas et veritas se zaměřuje na interdisciplinární zkoumání sociálních, etických a teologických výzev, které se objevují v době poznamenané populismem, polarizací a rychlými technologickými změnami. V dnešní době hrají náboženství a různé ideologické světonázory klíčovou roli při vymezování různých druhů hranic – mezi sociálními třídami, národy, bohatými a chudými, ale také mezi chudými a nejchudšími a mezi původním obyvatelstvem a přicházejícími migranty a uprchlíky z různých částí světa. Populističtí politici uzavírají nová spojenectví s církvemi a náboženskými hnutími, v zájmu získání větší moci vznikají nové náboženské komunity. Společenské a humanitní vědy – zejména teologie, etika a sociální práce – se musí těmto vlnám populismu a zneužívání náboženství a spirituality, stejně jako strachu a úzkosti, které vyvolávají, postavit čelem prostřednictvím důkladné analýzy současné situace, jejích kořenů a možného budoucího vývoje. Podtémata tohoto čísla mají za cíl společně podpořit bohatou akademickou diskusi na téma, jak mohou víra, etika a sociální odpovědnost reagovat na současné kulturní a politické otřesy a přispět k jejich řešení. Zvláště vítáme příspěvky zabývající se následujícími tématy:

- jazyk populismu: rétorika vyloučení, morální panika a odpovědnost za projev;
- neočekávané a/nebo nevinné oběti populismu: rodina, manželství, konzervativní politika, zranitelní/znevýhodnění a individuální odpovědnost;
- charita jako služba marginalizovaným/přehlíženým a její reakce na polarizaci a ideologický

konflikt;

- nová spojenectví proti populismu: sociální práce a pastorační péče, občanská a náboženská výchova;
- mluvit pravdu jako prorocké svědectví: filozofické základy pravdy v relativistické kultuře;
- etika sounáležitosti: uprchlíci, migrace, hranice a idol národní identity;
- teologické perspektivy pravdy v digitálním věku: etika umělé inteligence, deepfakes a syntetická média;
- sociální etika / katolická sociální nauka, demokracie a autokracie;
- krize důvěry v instituce.

## Topics of future issues

The following topics have been specified for future CetV issues and the editorial board will welcome contributions on these topics, in the form of scholarly studies and popular articles. Popular articles will be published based on the editorial board's decision, while scholarly studies are subject to the editorial board's assessment and double anonymous reviewing. The editorial board can also reject texts for capacity reasons or because they are not in accord with the journal profile and the focus of a topical issue.

### **2/2026** Pastoral Ministry and Social Sciences **Deadline: 30<sup>th</sup> June 2026**

Pastoral care, spiritual care, and poimenics have been integral parts of Christian churches since their inception. This ministry extends to both believers and non-believers, practitioners and non-practitioners of faith alike. It encompasses support in navigating difficult situations faced by individuals, groups, or communities and, more broadly, serves as a 'service to the world', through which local Christian communities (parishes, congregations, and fellowships) contribute to human dignity, social cohesion, and ethical action within specific historical, social, and geographical contexts. However, not every form of aid, outreach, or civic and community engagement can be labelled as pastoral care. A fundamental aspect of pastoral ministry is the communication of the Gospel, which does not equate to missionary work or proselytism. Rather, it refers to the transparent communication of worldviews and values in addressing contemporary challenges. Theologically speaking, responding to these challenges is rooted in Christian faith – for instance, in identifying what threatens the dignity of human beings created in God's image – and in Christian ethics, which seeks solutions grounded in a biblical ethos.

At the same time, the social sciences offer their own – often highly precise – methods for identifying contemporary societal problems. They provide valuable insights into the nature of these issues and can anticipate both the intended and unintended consequences of proposed solutions. Within the context of pastoral care, this creates a potentially complex and sometimes contentious intersection between two distinct epistemologies and theoretical frameworks. Consequently, pastoral approaches may be marginalised in problem-solving processes due to perceived analytical imprecision, slower effectiveness, or difficulty in demonstrating measurable results.

Issue 2/2026 will focus on this interface between theology and the social sciences, exploring two key areas: a) How can the epistemological approaches of the social sciences be applied in pastoral ministry? b) What specific research contributes to understanding and advancing pastoral care?

We welcome submissions on topics including, but not limited to:

- Research on singularities—specific pastoral care approaches that incorporate social science finding or methodologies.
- Studies or review articles examining dilemmatic situations in pastoral care: How is the balance between quantity and quality of interventions managed? How do pastoral workers navigate neutrality versus partiality in relation to the spiritual needs of those they serve?
- Research or theoretical studies on the concept of truth in pastoral care, particularly concerning its ontological and epistemological foundations.
- Analyses of tensions between the horizontal (social) and vertical (spiritual) dimensions of pastoral care.
- Research or theoretical essays addressing phenomena described by the social sciences as ‘signs of the times’.
- Studies reflecting on gradualism in pastoral care, exploring how theological objectives can be pursued while integrating social science insights into human relationships and contemporary challenges.
- Research or theoretical discussions on the application of social science methods in pastoral care while respecting their ontological and epistemological assumptions.
- Reflections on the legal aspects of pastoral care, particularly in relation to child protection laws (e.g., the Children’s Social Care Act) and professional confidentiality.

**1/2027**      Responsibility of helping professions for democracy  
**Deadline: 1<sup>st</sup> January 2027**

The issue 1/2027 of Caritas et Veritas focuses on an interdisciplinary exploration of the social, ethical, and theological challenges emerging in an age marked by populism, polarisation, and rapid technological transformation. In our time, religion and various ideological worldviews play a crucial role in defining different kinds of boundaries — between social classes, nations, the rich and the poor, also between the poor and the poorest, and between native populations and incoming migrants and refugees in and from several parts of the world, respectively. Populist politicians are forming new alliances with churches and religious movements, and new religious communities are being established in the pursuit of greater power. The social sciences and humanities — and especially theology, ethics, and social work — must confront these waves of populism and the misuse of religion and spirituality, as well as the fear and anxiety they generate, through rigorous analysis of the current situation, its roots, and possible future developments. Together, the sub-themes of this issue aim to foster a rich academic conversation on how faith, ethics, and social responsibility can respond to and help towards resolving contemporary cultural and political upheavals. We especially welcome submissions addressing the following topics:

- The Language of Populism: Rhetoric of Exclusion, Moral Panic, and Responsibility for Speech.
- Unexpected and/or Innocent Victims of Populism: Family, Marriage, Conservative Politics, the vulnerable/underprivileged, and Individual Responsibility.
- Caritas as Service to the Marginalised/Overlooked and Its Response to Polarisation and Ideological Conflict.

- New Alliances Against Populism: Social Work and Pastoral Care, Civic and Religious Education.
- Truth Telling as Prophetic Witness: Philosophical Foundations of Truth in a Relativistic Culture.
- The Ethics of Belonging: Refugees, Migration, Borders, and the Idol of National Identity.
- Theological Perspectives on Truth in the Digital Age: Ethics of AI, Deepfakes, and Synthetic Media.
- Social Ethics / Catholic Social Thought, Democracy and Autocracy.
- The Crisis of Trust in Institutions.

## Rozhovor

### Rozhovor s Jurajem Hvoreckým o umělé inteligenci, obavách z jejího rozvoje, náboženství a pečovatelských robotech.



Mgr. Juraj Hvorecký, Ph.D. je slovenský filozof pôsobiaci v Českej republike. Studoval filozofiu na Univerzite Komenského v Bratislave a na Slippery Rock University v Pensylvánii. Doktorát z filozofie získal na Filozofickom ústavu v Bratislave v roku 2005. V súčasnosti pôsobí ako vedúci Oddelenia aplikovanej filozofie a etiky na Filozofickom ústavu AV ČR. Je autorem rady odborných publikácií predovšetkým z oblasti filozofie mysli a aplikovanej etiky, zejména etiky nových technológií a inštitucionálnej etiky. Aktívne sa venuje tak tiež popularizácii spoločenských vied a je členom Bioetickej komise Rady pro výzkum, vývoj a inovace (RVVI) a Etickej komise pro posuzování otázek spojených s provozem automatizovaných a autonomních vozidel při Ministerstvu dopravy (MD).

Koncem roku 2022 zpřístupnila firma OpenAI bezplatně ChatGPT (GPT-3.5). Během pouhých dvou měsíců si tato aplikace získala přes 100 milionů uživatelů a téma umělé inteligence (AI) se rázem stalo předmětem širokých diskusí nejen v odborných kruzích, ale i mezi laickou veřejností. A podobně jako v případě covidu-19 či konfliktu na Ukrajině se jako mávnutím kouzelného proutku přes noc objevilo nepřeborné množství nových „odborníků“ i na toto módní téma. My se však známe již řadu let ze setkávání při různých příležitostech, především z Centra Karla Čapka pro studium hodnot ve vědě a technice a z etických komisí při RVVI a MD. Dobře vím, že na rozdíl od mnoha jiných „mluvících hlav“ je Tvůj zájem o umělou inteligenci daleko hlubší a dlouhodobější, a navíc do této diskuse vnášíš celou řadu aspektů, které bývají často opomíjeny, například pohledy z kognitivní vědy, filozofie mysli a společenských věd. Mohl bys nám tedy, Juraji, krátce představit svou cestu k tématu AI? Jak ses k němu vlastně dostal?

V současnosti mě mnoho lidí zná jako vedoucího Oddelenia aplikovanej filozofie a etiky na Filozofickom ústavu AV ČR, ale zaujímavejši je samozrejme cesta, jak jsem se na toto místo dopracoval, než pozice samotná. Jsem dítě přelomu, vysokou školu jsem začal studovat na začátku 90. let a po několika semestrech na Univerzite Komenského v Bratislave jsem s notnou dávkou štěstí vyhrál

stipendium do USA, kde jsem na malé *college* získal bakalářský titul. Následně po návratu na Slovensko se mi ještě díky Fulbrightovu stipendiu naskytla příležitost odjet na studijní pobyt mezi filosofické hvězdy v arizonském Tusconu. Nemohl jsem si přát víc: být formován předními světovými autoritami na epistemologii a filosofii mysli, jako jsou Alvin Goldman nebo David Chalmers, přiměje k intelektuální skromnosti, ale zároveň otevírá horizonty, které jinde nenajdete.

Má dizertace a většina další práce po příchodu do Česka (za což patří velké díky Ivanu M. Havlovi, 1938–2021) byla z oblasti filosofie psychologie a za samozřejmou jsem považoval i spolupráci s kolegy z kognitivní vědy, která tehdy byla u nás ještě v plenkách. Zajímaly mě emoce, racionalita, intencionalita, ale i teoretická psychologická témata jako modularita nebo vrozenost jazyka. Součástí tohoto prostředí byli vždy i lidé z oblasti informatiky a robotiky, a tak ani technologie mi nebyly cizí. A když se spustil *hype* kolem umělé inteligence, nebyl jsem zaskočen, jelikož jsem byl s termíny jako perceptron, učení s posilováním nebo vstupní neurony dlouho před tím dobře obeznámen.

Když Filosofický ústav začal klást větší důraz na generování aplikovaných výstupů a nabídl nám založení nového dedikovaného oddělení, byla to výzva. Podařil se nám ale husarský kousek. První rok fungování oddělení jsme věnovali psaní grantu při programu Horizont Evropa a hned napoprvé jsme jej získali, díky čemuž vzniklo CETE-P, tedy Centrum pro environmentální a technologickou etiku – Praha. Ještě bych chtěl poznamenat, že s aplikací to myslíme opravdu vážně a aktivně se zapojujeme do rozhodovacích procesů několika ústředních orgánů státní správy z pozice poradců nebo členů grémií.

**Aktuálním tématem Tvého výzkumu je zejména etika umělé inteligence a příbuzná témata. Jak vnímáš diskuse o existenční hrozbě ze strany AI a předpovědi, jako jsou ty od Eliezera Yudkowského a Natea Soarese, že závod o vývoj obecné umělé inteligence nedopadne dobře, jak ostatně hlásá i titul jejich knihy z roku 2025 „If Anyone Builds It, Everyone Dies“?**

Nejsem sám, kdo říká, že povaha diskuze je pomýlená: i když počet příspěvků o existenční hrozbě ze strany AI klesá (pak se ale objeví zpráva o novém jazykovém modelu Mythos od firmy Anthropic a hned jsou toho plné noviny), pořád platí, že pro stromy nevidíme les. Soustředíme se na jednotlivé excesy, projektujeme je dál do budoucna a inferujeme z nich fantaskní představy o konci lidstva. Mnohem důležitější je ale pozorně sledovat, co s námi AI dělá už dnes: jak ovlivňuje veřejnou diskuzi (znovuzavedením slov, které už ze slovníku pomalu mizely, nebo šířením dezinformací), jak kazí povahu vědecké práce (do metastudií se dostávají smyšlené práce a devalvují celkový výsledek), nebo ničí lidskou duši (sebepotvrzováním si vlastních postojů pomocí podbízivých chatbotů). To jsou skutečné etické a sociální výzvy doby. Čeká nás mnohem více práce pochopit, co se děje kolem nás tady a teď, než co může superinteligence nebo vzpoura robotů přinést ve vzdálenější budoucnosti.

**Když se tedy soustředíme na dnešek, jak se díváš na problematiku stagnace AI? Někteří výzkumníci totiž naopak mluví o tom, že jsme již narazili na výkonnostní strop a vlna zájmu o AI brzy opadne.**

Tady bych rozlišil dvě roviny. Stagnace z pohledu uživatele nedává smysl. Nové modely se objevují každý týden, konkurence je obrovská, a když se například podívám na výsledky AI v oblasti generování videa, pokrok za poslední rok je neuvěřitelný (což má mimochodem zásadní vliv na

epistemologii a etiku v oblasti deepfakes). Je pořád co vylepšovat, daří se nám lépe pracovat se syntetickými daty, algoritmy se optimalizují, modely zmenšují. Jenže pak je tady abstraktnější rovina: architektura transformerů, na kterých velké jazykové modely stojí, má své jasné limity a ukazuje se, že problémů jako halucinace nebo absence uvažování se nezbavíme, jelikož přímo plynou z podoby této architektury. Podobně se začíná ukazovat, že podbízivost modelů (označovaná jako *sycophancy*) není jenom výsledkem komerčních zájmů výrobců udržet nás u svého produktu, ale souvisí s povahou posilování modelů během tréninku. Opět je to něco, z čeho neexistuje jednoduchá cesta ven. Navíc, a na to se často zapomíná, „nemateriální“ inteligence se opírá o fyzický základ datacenter. Narážíme na nedostatek energie k jejímu provozu, vody ke chlazení a surovin k výrobě komponentů. Stagnace tedy může přijít i proto, že nápady na zlepšení bychom měli, ale není cesta, jak je realizovat.

**Přejděme nyní k tématu, které je v mimořádně sekulární a nenáboženské společnosti ČR velmi málo reflektováno, je však blízké tomuto časopisu (a věnují se mu i některé přijaté příspěvky). Co umělá inteligence a náboženství? Jak vidíš toto spojení?**

Jako věřící jsem byl prvotně nadšen, že budu svou víru konzultovat s chatbotem. I mnoho kněží asi tajně doufalo, že při psaní kázání jim budou asistovat jazykové modely. Jenže pokud jde o fakta (a jako luterán si zakládám na přesném znění svatých textů snad ještě více než ostatní konfese), tyto modely je prostě nemají. Jsou to jenom generátory textu na základě pravděpodobnostních vztahů v trénovacích datech. Pravděpodobnost a jistota jsou dosti odlišné koncepty a víra je zejména o jistotě. Také jsem silně proti zbožšťování takovýchto systémů, jak se to někdy děje. Dokonalost opravdu není vlastnost, kterou by obdobné systémy disponovaly, a obávám se, že právě nešťastné úvahy o superinteligenci (tj. AI, která přesahuje lidskou inteligenci natolik, že může samu sebe zlepšovat), mohou vést i k snahám o zbožštění umělých systémů. Se zájmem ale sleduji religionistickou práci, která se snaží postihnout, jakou konkrétní formu jednotlivých náboženství jazykové modely zachycují, nebo jak formují soudobé podoby víry.

Také je důležité si uvědomit, že technologie a náboženství na sebe vždy nějaký vliv budou mít. I procesy v církvi se automatizují, dobrý hypertextový vyhledávač je nezbytností nejen pro čtenáře Bible. A to nemluvím o online přenosech nebo přesných překladových nástrojích. K nějaké hlubší syntéze to ale zatím nespěje.

**Jaké další etické problémy vyvstávají z používání nových technologií?**

Upozornil bych na dvě témata, o kterých se mluví méně, než by bylo záhodno. První se týká už existující a široce rozšířené technologie *smart homes*. Tyto nástroje totiž přinášejí nová rizika a nové společenské dělení. Na jedné straně se ukazuje, že výraznější úsporu času ani více prostoru pro společné sdílení do domácnosti nepřinášejí. To ale není nic nového, existuje mnoho studií, které ukazují, jak zavedení nové technologie slibující osvobodit člověka od práce mu práci naopak přidává. Jenže v tomto případě se uvedený efekt propojuje se silnou uživatelskou jednostranností – obvykle má jenom jeden partner opravdovou kontrolu nad systémem (obvykle muž), on je ten znalý a kompetentní a taková epistemická asymetrie vede k nerovnostem a potenciálně k násilí. Známe situace, kdy partner i po rozchodu nadále ovládá domovní systém a brání v legitimním užívání bydlení.

Druhá oblast, která se týká spíše blízké budoucnosti, je nasazení pečovatelských robotů a dalších

sofistikovaných asistivních technologií. Důvody pro jejich nasazení jsou nasnadě. Populace stárne a o starší a nemocné se nemá kdo starat. Navíc je to práce vyčerpávající, často vede k vyhoření, je špatně placená a genderově nevyvážená. Tak ji zrobotizujeme. Jenže tenhle postup je mimořádně diskutabilní. Není ani tak otázkou, zda roboti vůbec mohou o někoho pečovat (i když i ta se hodně diskutuje). Mně zajímá zdánlivě mnohem přízemnější diskuze: jak víme, že roboti jsou již na plnění pečovatelských úkolů připraveni? Jinak řečeno, co to znamená testovat je a uvádět do praxe? Když se podíváte na aktuální situaci, vývoj probíhá téměř výhradně v akademickém prostředí, a když komerčně, tak vždy s podporou nějakých grantů. Jenže jakmile granty skončí, nemá na vývoj kdo navázat – a je celkem zjevné, že plně funkčního robota nevytvoříte za pár let. Dále je tady zatím eticky neprozkoumaná otázka testování. Co to znamená testovat pečovatelského robota? Protože je testovací, nechcete jej zkusit na zranitelných lidech z cílové skupiny. U nich totiž každé technické selhání (a že jich bude hodně!) znamená významné etické selhání. Tak je testujete na studentské populaci, která leccos vydrží a ráda zkusí nové věci. Jenže nakolik jsou pak získaná zjištění validní pro skutečnou cílovou skupinu? Starší lidé mají mnohem menší fyzickou výdrž, jejich mluva je často nejasná, jsou pomalí. Vytrénovat robota na populaci, která tyhle komplikace nemá, se zdá být úplně zbytečné. Jeho případné nasazení v reálném provozu pak přímo neetické. Jak trefně poznamenala jedna japonská ošetřovatelka, která má s roboty své zkušenosti: „když jej tady máme, je to pro nás jako mít dalšího pacienta s demencí“. Její poznámka otevírá mnohem širší filosoficko-sociální problém: jak pracovat s marginalizovanými skupinami, které technologie činí ještě více zranitelnými?

**Srdečně Ti, Juraji, děkuji za mimořádně podnětný rozhovor, který dle mého názoru výborně uvádí čtenáře do tematiky tohoto speciálního čísla „Umělá inteligence a proměna společnosti: Reflexe současných perspektiv a budoucích výzev pro společenské vědy a humanitní obory“.**

Daniel D. Novotný  
koeditor *Caritas et veritas*

# Studie Tématické

## Artificial Intelligence as a Challenge for Spiritual-theological Reflection in the Context of the Encyclicals *Laudato si'* and *Fratelli tutti*

Michal Černý

DOI: 10.32725/cetv.2026.004

### Abstract

The development of generative artificial intelligence in the last three years has fundamentally transformed the forms of education, the shape of the labour market and the competencies needed for a successful life in modern society. Church documents have commented on technical and social changes since the late 19th century, but the perception of selected social changes and their spiritual and social risks is broader. This study aims to create a field of thought constituted by reflection on contemporary socio-religious themes and to contextualise these themes through the themes of two encyclicals of Pope Francis—*Laudato si'* and *Fratelli tutti*. The study shows that technological changes will mean significant transformations in the field of spirituality and social work, for which it is necessary to prepare, both in terms of theoretical reflection and the practical training of individual professionals.

**Keywords:** encyclical, Pope Francis, artificial intelligence, logic, spirituality, social work, algorithms, technology.

### Introduction

The development of generative artificial intelligence, most often associated in broader society with dialogue systems such as ChatGPT or Google Gemini (formerly Bard) or image generators such as DALL·E or Midjourney,<sup>1</sup> represents one of the most significant economic and cultural changes that contemporary society is undergoing.<sup>2</sup> We can thus encounter a new AI literacy related to the

1 T. Hoppner and L. Streatfeild, 'Chatgpt, Bard & Co.: An Introduction to Ai for Competition and Regulatory Lawyers', in *An Introduction to AI for Competition and Regulatory Lawyers*, 2023, 9; M. Coeckelbergh and D.J. Gunkel, *ChatGPT: Deconstructing the Debate and Moving It Forward* (AI & SOCIETY, 2023); Peter J. Cobb, 'Large Language Models and Generative AI, Oh My!: Archaeology in the Time of ChatGPT, Midjourney, and Beyond', *Advances in Archaeological Practice* 11, no. 3 (August 2023): 363–69, <https://doi.org/10.1017/aap.2023.20>.

2 Spyros Makridakis, 'The Forthcoming Artificial Intelligence (AI) Revolution: Its Impact on Society and Firms', *Futures* 90 (1 June 2017): 46–60, <https://doi.org/10.1016/j.futures.2017.03.006>; Marilyn Binkley et al., 'Defining Twenty-First Century Skills', in *Assessment and Teaching of 21st Century Skills*, ed. Patrick Griffin, Barry McGaw, and Esther Care (Dordrecht: Springer Netherlands, 2012), 17–66, [https://doi.org/10.1007/978-94-007-2324-5\\_2](https://doi.org/10.1007/978-94-007-2324-5_2); Fiona Fui-Hoon Nah et al., 'Generative AI and ChatGPT: Applications, Challenges, and AI-Human Collaboration', *Journal of Information Technology Case and Application Research* 25, no. 3 (3 July 2023): 277–304, <https://doi.org/10.1080/15228053.2023.2233814>.

ability to use these tools critically, as well as a growing need to understand this topic in the broader context of law, education or the transformation of the labour market.<sup>3</sup> In Catholic settings, it was previously the case that magisterial documents addressed social issues with a considerable historical lag, which reduced their social and spiritual-theological relevance. It is undeniable that both *Rerum Novarum* (1891) and *Quadragesimo anno* (1931) can be judged in these terms, which, despite their partial qualities, were produced too late and left too many questions or problems long without real attention.

In this respect, *Laudato si'* (2015)<sup>4</sup> also comes fundamentally late (despite its positive moments, it can be said that environmental issues and climate change have been a public debate in social contexts since at least the 1980s), focusing on the environment. By contrast, *Fratelli tutti* (2020)<sup>5</sup> is perhaps one of the few encyclicals to respond to the specific transformation of the world after 2010, i.e., with relatively little distance.

Suppose it can be traced that the social encyclicals reflect society's social crises and transformations, and try to create an environment for a morally and spiritually good experience of the Christian way of life. In that case, one may ask what the social-spiritual challenges connected precisely with the advent of artificial intelligence and what transformation must be undergone by the ways of living the faith in a world entering with complete determination into a post-industrial information environment.<sup>6</sup> As Luciano Floridi points out— technologies do not play the role of a tool among tools in the contemporary world; they are not Heideggerian handheld beings<sup>7</sup> but rather part of social or techno-social interactions, in a way and with an impact that is quite unprecedented in the history of the relationship between technology and man.<sup>8</sup>

Pope Francis is quite explicit on the topic—the phrase 'artificial intelligence' appears in a total of 22 documents indexed by the Holy See, and two documents from 2024 in particular—*Intelligenza artificiale e pace*<sup>9</sup> and *Intelligenza artificiale e sapienza del cuore: per una comunicazione pienamente umana*<sup>10</sup>—are devoted to it in a significant way. Individual references are also found in other documents. This study will analyse the approach of the papal discourse on this issue and situate it in a broader research and social field. In this way, we will try to identify the challenges and threats fundamental to the social and spiritual aspects of the Church related to this issue.

3 S.C. Necula, 'Artificial Intelligence Impact On The Labour Force—Searching For The Analytical Skills Of The Future Software Engineers', 2023; T. Kőkuti, 'Artificial Intelligence in a Transforming Labour Market—New Skills Are Needed?', *Journal of Recycling Economy & Sustainability Policy* 2, no. 1 (2023); David Baidoo-Anu and Keticia Owusu Ansah, 'Education in the Era of Generative Artificial Intelligence (AI): Understanding the Potential Benefits of ChatGPT in Promoting Teaching and Learning', 2023, [https://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=4337484](https://papers.ssrn.com/sol3/papers.cfm?abstract_id=4337484); Meng-Leong How and Wei Loong David Hung, 'Educating AI-Thinking in Science, Technology, Engineering, Arts, and Mathematics (STEAM) Education', *Education Sciences* 9, no. 3 (15 July 2019): 184, <https://doi.org/10.3390/educsci9030184>.

4 Francis, *Laudato Si* (Dicastero per la Comunicazione - Libreria Editrice Vaticana, 2015), [https://www.vatican.va/content/francesco/en/encyclicals/documents/papa-francesco\\_20150524\\_enciclica-laudato-si.html](https://www.vatican.va/content/francesco/en/encyclicals/documents/papa-francesco_20150524_enciclica-laudato-si.html).

5 Francis, 'Fratelli tutti' (Dicastero per la Comunicazione - Libreria Editrice Vaticana, 2020), [https://www.vatican.va/content/francesco/en/encyclicals/documents/papa-francesco\\_20201003\\_enciclica-fratelli-tutti.html](https://www.vatican.va/content/francesco/en/encyclicals/documents/papa-francesco_20201003_enciclica-fratelli-tutti.html).

6 Frank Webster, *Theories of the Information Society* (Routledge, 2014); Bruno Latour, *After Lockdown: A Metamorphosis* (Cambridge, UK ; Medford, MA: Polity Press, 2021).

7 Martin Heidegger, *Being and Time* (Blackwell, 1967); Martin Heidegger, *Die Frage Nach Der Technik ; Wissenschaft Und Besinnung ; Überwindung Der Metaphysik ; Wer Ist Nietzsches Zarathustra?* (Pfullingen: Neske, 1967).

8 James Bridle, *New dark age: Technology and the end of the future* (Verso Books, 2018); Bruno Latour, *Zpátky Na Zem: Jak Se Vyznat v Politice Nového Klimatického Režimu*, 1., vol. 2020 (Praha: Neklid, 2020); Václav Bělohorský, *Čas Pléthokracie: Když Části Jsou Větší Než Celky a Světový Duch Spadl z Koně*, 1., vol. 2021 (Praha: Nakladatelství 65. pole, 2021).

9 Francis, 'LVII Giornata Mondiale Della Pace 2024 - Intelligenza Artificiale e Pace', La santa sede, 2024, <https://www.vatican.va/content/francesco/it/messages/peace/documents/20231208-messaggio-57giornatamondiale-pace2024.html>.

10 Francis, 'Intelligenza Artificiale e Sapienza Del Cuore: Per Una Comunicazione Pienamente Umana', Vatican.va, 2024, <https://www.vatican.va/content/francesco/it/messages/communications/documents/20240124-messaggio-comunicazioni-sociali.html>.

The definition of spirituality is ambiguous in the literature,<sup>11</sup> and one clear definition cannot be provided.<sup>12</sup> For our study, it will be understood as a relation to a transcendent being that manifests itself in the experience and structuring of the everyday. It is thus associated with a relationship to transcendence experience, hope and meaningfulness, often in the ritualised form of religious experience (ritual) or prayer or meditation.<sup>13</sup> We will, therefore, not follow a descriptive (sociological) perspective (although it can serve as a starting point) but a theological perspective that is not divorced from the social and cultural environment of the one who experiences spirituality.<sup>14</sup> As much as our analysis focuses on documents issued by Pope Francis, it offers broader ecumenical perspectives. In some places in the paper, we will emphasise the spiritual-theological specificity, the religious (Christian) dimension of spirituality, where it will not be completely obvious. However, we perceive a certain vagueness or ambiguity of the notion of spirituality with Tomas Špidlík as essential for a theologically adequate statement. We incline to Špidlík's view that those rigid definitions lead to a technification of statements about spirituality that is antithetical to its liveliness.<sup>15</sup> Following this, we want to build the study epistemically based on a content analysis of selected documents issued by Pope Francis and interpret them in continental thought. In it, we will relate primarily to the postmodern tradition (Bělohradský, Bauaman) and their phenomenological starting points (Bělohradský is an authentic disciple of Patočka).<sup>16</sup> This field makes it possible to sufficiently reflect on the interaction between lived experience<sup>17</sup> and the social environment and to work with the critical methodological approach in Francis' documents, namely the concept of Ignatian distinction.<sup>18</sup> It is in this field that our methodological and epistemological foundations are situated.

## Generative AI and Spirituality: the Current Research Field

The relationship between artificial intelligence and religion is reflected in the current literature in different ways or perspectives.<sup>19</sup> It is outside the scope of our study to offer a systematic analysis of the whole issue. Still, we would like to focus on selected social-spiritual phenomena (by this term

- 11 Jane Dyson, Mark Cobb, and Dawn Forman, 'The Meaning of Spirituality: A Literature Review', *Journal of Advanced Nursing* 26, no. 6 (1997): 1183–88, <https://doi.org/10.1046/j.1365-2648.1997.00446.x>; David H. Rosmarin and Harold G. Koenig, *Handbook of Spirituality, Religion, and Mental Health* (Academic Press, 2020).
- 12 Sandra M. Estanek, 'Redefining Spirituality: A New Discourse', *College Student Journal* 40, no. 2 (1 June 2006): 270–82, <https://go.gale.com/ps/i.do?p=AONE&sw=w&issn=01463934&v=2.1&it=r&id=GALE%7CA147389132&sid=googleScholar&linkaccess=abs>.
- 13 Dyson, Cobb, and Forman, 'The Meaning of Spirituality'; hosaini Maryam et al., 'A Review Study on Spiritual Intelligence, Adolescence and Spiritual Intelligence, Factors That May Contribute to Individual Differences in Spiritual Intelligence, and the Related Theories', *International Journal of Psychological Studies* 6 (21 November 2010), <https://doi.org/10.5539/ijps.v2n2p179>.
- 14 Michal Altrichter, *Příručka spirituální teologie* (Refugium Velehrad-Roma, 2007); Michal Altrichter, *Žijeme v době papeže Františka* (Refugium Velehrad-Roma, s.r.o., 2018).
- 15 Tomáš Špidlík and Marko Ivan Rupnik, *Integrální poznání: symbol jako nejdokonalejší výpověď* (Refugium Velehrad-Roma, s.r.o., 2015).
- 16 Špidlík cannot be counted in the postmodern tradition. Still, at the same time, it can be said that his approach throughout his work transcends analytical conceptualisations in theology or the need to offer one clear definition. His works are characterised by a systematic layering of perspectives in theology, literature, or the visual arts, linking Eastern and Western thought, not in the unified form of a single statement, but in a critically reflected plurality that corresponds to the incompleteness of knowledge of the human being found in the world. In this view, we can say that phenomenology and postmodernism represent a specific conservative concept of interpellation of Špidlík's approach to spirituality as they clearly emphasise the existence of Truth as a person. While Špidlík focuses on purely Christian spirituality, we can see from Pope Francis' texts a shift towards a particular ecumenical perspective, especially on morality, the environment and spirituality.
- 17 Altrichter, *Žijeme v době papeže Františka*; Heidegger, *Being and Time*.
- 18 Philip Edean, *Karl Rahner and Ignatian Spirituality* (OUP Oxford, 2004); Somy Mathew, 'The Interpretations of the Ignatian Examenin History : Between Morality and Spirituality', 2018, <https://repositorio.comillas.edu/xmlui/handle/11531/30002>.
- 19 Mark Graves, 'Embodied Experience in Socially Participatory Artificial Intelligent', *Zygon* 58, no. 4 (2023): 928–51, <https://doi.org/10.1111/zygo.12910>; Andrea Vestrucci, 'Introduction: Five Steps Toward a Religion–Ai Dialogue', *Zygon* 57, no. 4 (2022): 933–37, <https://doi.org/10.1111/zygo.12828>; Sara Lumbreras, 'Lessons from the Quest for Artificial Consciousness: The Emergence Criterion, Insight-Oriented Ai, and Imago Dei', *Zygon* 57, no. 4 (2022): 963–83, <https://doi.org/10.1111/zygo.12827>.

we mean the relationship of spirituality and social environment, not a descriptive sociological reflection of spirituality) related to changing the possibilities of pursuing a religious life.

The first essential issue mentioned in the papal document *Intelligenza artificiale e pace*<sup>20</sup> is the question of morality or, rather, the relationship between moral theology and artificial intelligence.<sup>21</sup> Graves believes that the task of moral theology should be to develop a timetable for critical reflection on the relationship between artificial intelligence and human beings so that artificial intelligence can be seen as a tool for the development of humanity and human society,<sup>22</sup> but this will not happen automatically or only based on market demands.<sup>23</sup> The question of morality is generally relevant as it inscribes itself in how life schedules are enacted. However, one can agree with Heidegger that it is a secondary manifestation of a particular lived ontology.<sup>24</sup> Other authors also lean towards this conception, offering a broader thought anchoring the whole issue. Graves is systematically concerned with incorporating corporeality into ontological models, which is necessary to genuinely consider morality or the self of sociotechnical systems.<sup>25</sup> In doing so, he continues the pragmatist tradition, emphasising the importance of the body of corporeality in the process of thought and action.<sup>26</sup>

The relationship between man and technology in creating sociotechnical systems and metaphysical reality appears crucial. As Latzer points out,<sup>27</sup> a new relationship between man and technology transforms the fundamental metaphysical, ontological and evolutionary schemes. Technology has become an integral part of evolution and has essentially deistic attributes—it is associated with omnipresence, eternal memory, and power; religious professionals can control it, and it has the character of a shamanistic religion. Suppose Luckmann, in his vision of an invisible religion, worked with a particularly optimistic outlook that society would retain rituals that were essentially dominantly Christian and would secondarily profane them. In that case,<sup>28</sup> Latzer shows that the relationship between humans in Western culture and religion may be considerably flat, linked to the need for mythic interpretation and control of the world.<sup>29</sup> Or at least to feel comfortable and secure in it.<sup>30</sup>

A critical issue addressed in the relationship between spirituality and technology is the question of trust. Smith notes that technology can inspire trust, unencumbered by human failings and weaknesses, abuses, and power discourses. They seem to be less selfish in some ways, which is very desirable for a portion of people experiencing trauma from interpersonal communication.<sup>31</sup>

20 Francis, 'LVII Giornata Mondiale Della Pace 2024 - Intelligenza Artificiale e Pace'.

21 Mark Graves, 'Theological Foundations for Moral Artificial Intelligence', *Journal of Moral Theology* 11, no. S11 (2 April 2022): 182–211, <https://doi.org/10.55476/001c.34130>.

22 C. Narvaez Rojas et al., 'Society 5.0: A Japanese Concept for a Superintelligent Society', *Sustainability* 13, no. 12 (2021): 6567, <https://doi.org/10.3390/su13126567>.

23 Bělohradský, *Čas Pléthokracie: Když Části Jsou Větší Než Celky a Světový Duch Spadl z Koně*; Zygmunt Bauman and Leonidas Donskis, *Liquid Evil* (John Wiley & Sons, 2016).

24 Heidegger, *Being and Time*; Martin Heidegger, *Martin Heidegger: rozhovory k osmdesátým narozeninám* (OIKOYMENH, 2013).

25 Mark Graves, 'Emergent Models for Moral AI Spirituality', *International Journal of Interactive Multimedia and Artificial Intelligence* 7, no. 1 (2021): 7, <https://doi.org/10.9781/ijimai.2021.08.002>.

26 M. Johnson, *Embodied Mind, Meaning, and Reason* (University of Chicago Press, 2017); G. Lakoff, *Women, Fire, and Dangerous Things: What Categories Reveal about the Mind* (University of Chicago press, 1990); Radim Šíp, *Proč školství a jeho aktéři selhávají* (Masarykova univerzita, 2019).

27 Michael Latzer, 'The Digital Trinity—Controllable Human Evolution—Implicit Everyday Religion: Characteristics of the Socio-Technical Transformation of Digitalization', *KZfSS Kölner Zeitschrift Für Soziologie Und Sozialpsychologie* 74, no. S1 (June 2022): 331–54, <https://doi.org/10.1007/s11577-022-00841-8>.

28 Thomas Luckmann, *The Invisible Religion* (Macmillan, 1967).

29 Latzer, 'The Digital Trinity—Controllable Human Evolution—Implicit Everyday Religion'.

30 Ronald Purser, *McMindfulness: How Mindfulness Became the New Capitalist Spirituality* (London: Repeater, 2019); Zygmunt Bauman, *Liquid Modernity* (John Wiley & Sons, 2013).

31 Gregory Smith, 'Christianity and Libraries: A "Conversation" with ChatGPT', *Faculty Publications and Presentations*, 8 March 2023,

At the same time, however, he points out that systems with generative AI hallucinate, unable to distinguish when they generate factual statements and when they create fabrications. This hallucination is seen as one of the significant communication risks.<sup>32</sup> However, as Reed notes, every conversation (unless held in a single thread in systems with registration) starts over, so the dimension of trust is embedded not in a single digital avatar but in an entire system of spiritual advisors.<sup>33</sup> These are often shaped (across religions and communities) by drawing on the ChatGPT-4 language model, which provides a very fluid language. Their value and content bases are linked to training on sacred texts that are interpreted literally, leading to the concept of digital fundamentalist religious leaders.<sup>34</sup>

We thus stand in a remarkable space where, on the one hand, an inevitable crisis of Christian practice<sup>35</sup> and human disillusionment can lead to a turn to technology, to the creation of a new god (cf. Ex 32); on the other hand, these technologies are associated with a considerable number of risks that believers are often unaware of.<sup>36</sup> In part, this is because they lack a specific AI literacy, the ability to understand AI systems and the skill to use them, but this is coupled with a critical assessment of the limits of these tools.<sup>37</sup> At the same time, we cannot neglect the impact of the absence of spiritual literacy, that is, a particular ability to critically reflect and live one's spirituality.<sup>38</sup> We are thus faced with a paradoxical situation where technology permeates all areas of human life. On the other hand, it has created a world so complex and complicated that many people cannot navigate it.<sup>39</sup>

Bauman puts this transformation of society in the context of the transformation of modernity—from rigid to fluid, for which the dissolution of specific fixed ties, authorities and institutions is significant.<sup>40</sup> Identity ceases to be—according to Bauman—a question of status but a task.<sup>41</sup> In other words, asking for the identity of the Christian, a previously popular question associated with the middle of the last century, is not only not meaningful but not even possible in the contemporary world. Identity<sup>42</sup> is fluid and dynamic. The fact that identity is not fixed but fluid<sup>43</sup> presents an inherent challenge, both theological and social pedagogical or social work related. There is both

---

[https://digitalcommons.liberty.edu/lib\\_fac\\_pubs/214](https://digitalcommons.liberty.edu/lib_fac_pubs/214).

32 Smith; Hassan Alkaissi and Samy McFarlane, 'Artificial hallucinations in ChatGPT: implications in scientific writing', *Cureus* 15, no. 2 (2023).

33 Randall Reed, 'The Theology of GPT-2: Religion and Artificial Intelligence', *Religion Compass* 15, no. 11 (2021): e12422, <https://doi.org/10.1111/rec3.12422>.

34 Hazel T. Biana, 'Feminist Re-Engineering of Religion-Based AI Chatbots', *Philosophies* 9, no. 1 (February 2024): 20, <https://doi.org/10.3390/philosophies9010020>; Andie Rothenhäusler, '„Creating God“: Religiöse Metaphorik in KI- Und Technikediskursen', in *KI:Text*, ed. Gerhard Schreiber and Lukas Ohly (De Gruyter, 2024), 183–98, <https://doi.org/10.1515/9783111351490-013>.

35 Tomáš Halík, *Odpoledne Křesťanství: Odvaha k Proměně*, vol. 2021 (Praha: Lidové noviny, 2021).

36 Reed, 'The Theology of GPT-2: Religion and Artificial Intelligence'; Smith, 'Christianity and Libraries'.

37 Davy Tsz Kit Ng et al., 'Using Digital Story Writing as a Pedagogy to Develop AI Literacy among Primary Students', *Computers and Education: Artificial Intelligence* 3 (2022): 100054, <https://doi.org/10.1016/j.caeai.2022.100054>; Davy Tsz Kit Ng et al., 'A Review of AI Teaching and Learning from 2000 to 2020', *Education and Information Technologies* 28, no. 7 (July 2023): 8445–8501, <https://doi.org/10.1007/s10639-022-11491-w>; Amy Eguchi, Hiroyuki Okada, and Yumiko Muto, 'Contextualizing AI Education for K-12 Students to Enhance Their Learning of AI Literacy Through Culturally Responsive Approaches', *KI - Künstliche Intelligenz* 35, no. 2 (June 2021): 153–61, <https://doi.org/10.1007/s13218-021-00737-3>.

38 Maryam et al., 'A Review Study on Spiritual Intelligence, Adolescence and Spiritual Intelligence, Factors That May Contribute to Individual Differences in Spiritual Intelligence, and the Related Theories'; Geoff Taggart, 'Spiritual Literacy and Tacit Knowledge', *Journal of Beliefs & Values* 23, no. 1 (April 2002): 7–17, <https://doi.org/10.1080/13617670220125638>.

39 Frank Webster and Raimo Blom, eds., *The Information Society Reader* (London: Routledge, 2020); J.A. Van Dijk, *The deepening divide: Inequality in the information society* (Sage publications, 2005).

40 Bauman, *Liquid Modernity*; Zygmunt Bauman, *Modernity and the Holocaust*, Reprint (Cambridge: Polity Press, 2007).

41 Zygmunt Bauman, *The Individualized Society* (John Wiley & Sons, 2013).

42 Luciano Floridi, 'The Construction of Personal Identities Online', *Minds And Machines* 21, no. 4 (2011): 477–79, <https://doi.org/10.1007/s11023-011-9254-y>.

43 AZIZ Talbani and PARVEEN Hasanali, 'Adolescent Females between Tradition and Modernity: Gender Role Socialization in South Asian Immigrant Culture', *Journal of Adolescence* 23, no. 5 (1 October 2000): 615–27, <https://doi.org/10.1006/jado.2000.0348>.

an erosion of expected outcome states and a transformation of what have been conventionally referred to as the target groups of social interventions.<sup>44</sup> Luckman's concept of an invisible religion<sup>45</sup> only confirms this transformation—the boundaries of traditional categories cease to exist, and the possibility of working with the early modern figure of 'either/or', i.e., the binary oppositional division of the world ends. We enter an environment with an order of magnitude higher degree of complexity and an entirely new way of interpreting the world.<sup>46</sup>

The information revolution also transforms work and the social perception of work associated with it in at least three ways. The first change is related to the transformation of the entire labour market, with the emergence of new professions and probably a specific sectoral transformation of jobs.<sup>47</sup> Studies agree on the difficulty of predicting change, but at the same time it is clear that the labour market has never undergone such a rapid transformation as now. Beyond the general observation of market changes related to fluidity (the need to change occupations repeatedly during working life), there is no consensus on a more precise impact prediction. Oschinski<sup>48</sup> points to a possible increase in unemployment, especially in blue-collar occupations, as activities will be automated (it may partly affect, as shown by the medical support staff); Hui et al.<sup>49</sup> believe that the impact will be on information specialists, whose work will be replaceable by artificial intelligence in the short term for many institutions. It is thus paradoxical that those who should be at the core of the information revolution, as Reich argues, become threatened by the change.<sup>50</sup> One can agree with Bauman's broader point<sup>51</sup> that the sense of permanently belonging to a particular profession or even an organisation where one works all one's life does not correspond to the current state of the globalised world. Suppose we have talked about identity as a task. In that case, the idea of professional identity as a permanent part of identity is not strong enough for a significant part of people in the contemporary world. This fact alone is a substantial source of uncertainty to which spirituality and social and pastoral work must respond.

The second transformation is the relationship to technology. While in *Being and Time*, Heidegger still understood technology as a specific passive element, a handy being, a tool; in his later works, he gradually clarified this relationship. He points out that we live in the drag of technology, that thinking becomes dependent on technology, but at the same time, it reveals the world's hiddenness.<sup>52</sup> Bridle then draws attention to the autonomy of technology, which can no longer be

44 Stanislav Bendl, *Nárys sociální pedagogiky* (Univerzita Karlova, 2014); Jan Kaňák, 'Nedefinovaná Profesionalita: Vztah Diskursů Spiritualita a Profesionality v Sociální Práci v Soudobé Odborné Literatuře' 16 (15 September 2016): 72–91; Jitka Navrátilová, Pavel Navrátil, and Masaryk University, Faculty of Social Studies, 'Vzdělávací diskurzy v sociální práci', *Sociální pedagogika / Social Education* 4, no. 1 (15 November 2016): 38–56, <https://doi.org/10.7441/soced.2016.04.01.03>.

45 Luckmann, *The Invisible Religion*; Kelly Besecke, 'Seeing Invisible Religion: Religion as a Societal Conversation about Transcendent Meaning', *Sociological Theory* 23, no. 2 (2005): 179–96.

46 Latour, *Zpátky Na Zem: Jak Se Vyznat v Politice Nového Klimatického Režimu*; Latour, *After Lockdown*; Luciano Floridi, *The Logic of Information: A Theory of Philosophy as Conceptual Design* (Oxford University Press, 2019).

47 Dilek Cetindamar et al., 'Explicating AI Literacy of Employees at Digital Workplaces', *IEEE Transactions on Engineering Management*, 2022, 1–14, <https://doi.org/10.1109/TEM.2021.3138503>; Carl Benedikt Frey and Michael A. Osborne, 'The Future of Employment: How Susceptible Are Jobs to Computerisation?', *Technological Forecasting and Social Change* 114 (1 January 2017): 254–80, <https://doi.org/10.1016/j.techfore.2016.08.019>; Anthony E. Davis, 'The Future of Law Firms (and Lawyers) in the Age of Artificial Intelligence', *Revista Direito GV* 16, no. 1 (2020): e1945, <https://doi.org/10.1590/2317-6172201945>; Frey and Osborne, 'The Future of Employment'.

48 Matthias Oschinski, 'Assessing the Impact of Artificial Intelligence on Germany's Labor Market: Insights from a ChatGPT Analysis', MPRA Paper, 14 August 2023, <https://mpra.ub.uni-muenchen.de/118300/>.

49 Xiang Hui, Oren Reshef, and Luofeng Zhou, 'The Short-Term Effects of Generative Artificial Intelligence on Employment: Evidence from an Online Labor Market', SSRN Scholarly Paper (Rochester, NY, 31 July 2023), <https://doi.org/10.2139/ssrn.4527336>.

50 Robert B. Reich, *The Work of Nations: Preparing Ourselves for 21st Century Capitalis* (Knopf Doubleday Publishing Group, 2010).

51 Bauman, *Liquid Modernity*.

52 Heidegger, *Die Frage Nach Der Technik ; Wissenschaft Und Besinnung ; Überwindung Der Metaphysik ; Wer Ist Nietzsches Zarathustra?*; Martin Heidegger and William McNeill, *Pathmarks*, Reprinted (Cambridge: Cambridge University Press, 1998).

understood as value-neutral, as an active actor in the space of our lives.<sup>53</sup> According to Rupert, following Clark Chalmers,<sup>54</sup> technology is not just part of the environment, a working tool, but increasingly part of a particular field of the extended mind. As Latour and Floridi point out, technology is not a tool but an actor of informational interactions. Work is thus not done by man through the machine, typical of industrial societies, but by man together with the machine<sup>55</sup> within a socio-technical system.<sup>56</sup> Suppose some people tend to trust artificial intelligence to the extent that they make it their religious leader. In that case, it can be said that this may be a manifestation associated with the transference of experience of working with these systems, for example in employment.

In this respect, it can be said that the social, economic and labour changes associated with the advent of the Industrial Revolution seem to be much smaller and more gradual than the current informational ones. Suppose the Industrial Revolution has created a whole new group of orders, congregations, prelatures and spiritualities. In that case, it can be said that it is highly probable that the development of artificial intelligence will bring about a similar change.

With the change in the social structure, the educational environment is being transformed simultaneously. It appears that a fundamental rethinking of the school concept will be necessary, as it has entered a long-term crisis<sup>57</sup> closely linked to the crisis of modernity. Reflections on the new role of education in this environment are the subject of several partial analyses.<sup>58</sup> Essential to our study is the approach taken by Codnerey,<sup>59</sup> who points not only to the transformation of educational content and forms but, above all, to the need to rethink the task of the Christian educator. The aim is not to replace the human or human teacher but to shape the requirements for a new structuring of the identity of the Christian teacher.

## Artificial Intelligence in the Context of the Encyclicals *Fratelli tutti* and *Laudato si'*

*Laudato si'* (2015) approaches technology and the technological transformation of society and spirituality in a somewhat sceptical and more profound way. In particular, paragraphs 102-115 present a fairly robust systematic insight into the issue, although artificial intelligence is not mentioned here, and intelligence is understood as an intrinsically human characteristic (paragraphs 68, 69, 78, 79, 83, 192). Compared to the following encyclical, *Fratelli tutti*, technology appears here predominantly without adjectives.

53 Bridle, *New dark age: Technology and the end of the future*.

54 A. Clark and D. Chalmers, 'The Extended Mind', *Analysis* 58, no. 1 (1998): 7–19.

55 Morteza Ghobakhloo, 'Industry 4.0, Digitization, and Opportunities for Sustainability', *Journal of Cleaner Production* 252 (April 2020): 119869, <https://doi.org/10.1016/j.jclepro.2019.119869>; A. Benešová and J. Tupa, 'Requirements for Education and Qualification of People in Industry 4.0', *Procedia Manufacturing* 11 (2017): 2195–2202.

56 Steven H. Appelbaum, 'Socio-technical Systems Theory: An Intervention Strategy for Organizational Development', *Management Decision* 35, no. 6 (1 January 1997): 452–63, <https://doi.org/10.1108/00251749710173823>.

57 Šíp, *Proč školství a jeho aktéři selhávají*; Sabine Seufert, Josef Guggemos, and Eric Tarantini, 'Digitale Transformation in Schulen – Kompetenzerfordernisse an Lehrpersonen', *Beiträge zur Lehrerinnen- und Lehrerbildung: Zeitschrift zu Theorie und Praxis der Aus- und Weiterbildung von Lehrerinnen und Lehrern* 36, no. 2 (2018): 175–93, <http://nbn-resolving.de/urn:nbn:de:0111-pedocs-170969>; Baidoo-Anu and Owusu-Ansah, 'Education in the Era of Generative Artificial Intelligence (AI): Understanding the Potential Benefits of ChatGPT in Promoting Teaching and Learning'.

58 How and Hung, 'Educating AI-Thinking in Science, Technology, Engineering, Arts, and Mathematics (STEAM) Education'; I. Atmosukarto et al., 'We Are Enhancing Adaptive Online Chemistry Course with AI-Chatbot', in *2021 IEEE International Conference on Engineering, Technology & Education (TALE)* (IEEE, 2021), 838–43; Ismail Dergaa et al., 'From Human Writing to Artificial Intelligence Generated Text: Examining the Prospects and Potential Threats of ChatGPT in Academic Writing', *Biology of Sport* 40, no. 2 (2023): 615–22, <https://doi.org/10.5114/biolSport.2023.125623>; Fauzi Fauzi et al., 'Analysing the Role of ChatGPT in Improving Student Productivity in Higher Education', *Journal on Education* 5, no. 4 (6 April 2023): 14886–91, <https://doi.org/10.31004/joe.v5i4.2563>.

59 B.J. Condrey, 'The Christian Educator as Prophet, Priest, and King: Nurturing Moral Formation in a ChatGPT Era', *International Journal of Christianity & Education*, 25 August 2023, 20569971231196809, <https://doi.org/10.1177/20569971231196809>.

If we want to identify certain discourses, the first is the **relationship between technology and change**. ‘Humanity has entered a new era’ (§ 102), which, however, may not only bring positive effects but is associated with several adverse effects. It is the product of human creativity, which is a gift of God but simultaneously reveals man’s weakness. *Laudato si’* is a technologically dominant sceptical text. According to the Pope, technology is a source of political and economic change (§105-106); it is part of the difficulties of the contemporary world (§107) because the technocratic paradigm seeks to dominate the whole economy and politics, it is the source of new consumerism—the market alone does not ensure integral human development (*sviluppo umano integrale*) or social inclusion, it is wasteful.

In other words, the changes that the world is undergoing represent a fundamental redistribution of political and economic power, not leading to greater social reconciliation but, perhaps, on the contrary, to growing disparities. Poverty has both an objective definition, and in this respect, the world is, on average, getting better, and a subjective one, and here we can see the dimension of significant economic and market imbalances and disparities in access to education and other social services. In the context of AI, we can say that there will be changes in the occupational structure of the world of work,<sup>60</sup> which may lead to new social differences and problems. More and more people will find it challenging to have an indeed developed ability to work with AI in specific fields,<sup>61</sup> which will impact their position in the labour market.<sup>62</sup> One of the essential forms of change is the weakening of the power of nation-states and the rise of the power of technology companies,<sup>63</sup> a phenomenon whose effects we have not yet seen enough of.<sup>64</sup>

The second critical discourse, also present in *Fratelli tutti*, is the **technological or technocratic paradigm**. Although these are two phenomena partially separate from each other, they form a specific integral unit in the papal documents—technology is a means of control, exercising power, changing its distribution, and simultaneously a form of a particular inhumanistic reduction of man. The intentions of Freire’s<sup>65</sup> reflections can be read, ‘*There needs to be a distinctive way of looking at things, a way of thinking, policies, an educational programme, a lifestyle and a spirituality which together generate resistance to the assault of the technocratic paradigm. [...] Liberation from the dominant technocratic paradigm does in fact happen sometimes.*’ (§111-112) Technology can only be morally justified when it becomes the source of a certain communal emancipation (§112) when directed towards the search for an authentic humanity that seems to be completely obscured and neglected by these cultural backdrops (§112).

The question of new humanism in the context of artificial intelligence is one of the critical topics of current research. Benedikter and Fahi talk about the humanisation of technology,<sup>66</sup> which they see as a path to a new understanding of the human phenomenon. Lollini argues that technology allows humanity to be understood more broadly than before the information revolution; Floridi makes humans just one of the information agents.<sup>67</sup> We are in a situation where it is impossible to ask what is the place of man in the universe<sup>68</sup> but to ask anew who the man is, what constitutes

60 Frey and Osborne, ‘The Future of Employment’; Frey and Osborne.

61 Astrid Carolus et al., ‘Digital Interaction Literacy Model – Conceptualizing Competencies for Literate Interactions with Voice-Based AI Systems’, *Computers and Education: Artificial Intelligence* 4 (2023): 100114, <https://doi.org/10.1016/j.caeai.2022.100114>.

62 Cetindamar et al., ‘Explicating AI Literacy of Employees at Digital Workplaces.’

63 Bridle, *New dark age: Technology and the end of the future*.

64 Bělohradský, *Čas Pléthokracie: Když Části Jsou Větší Než Celky a Světový Duch Spadl z Koně*.

65 Paulo Freire, *Pedagogy of the Oppressed: 30th Anniversary Edition* (Bloomsbury Publishing USA, 2014).

66 Roland Benedikter and Karim Fathi, ‘“Humanised” Technology Instead of a New Humanism?’, in *The Coronavirus Crisis and Its Teachings* (Brill, 2021), 63–69, [https://doi.org/10.1163/9789004469686\\_013](https://doi.org/10.1163/9789004469686_013).

67 Luciano Floridi, *The Philosophy of Information* (Oxford University Press, 2013).

68 Pierre Teilhard de Chardin, *Le phénomène humain* (Éditions du Seuil, 1964).

his core, the authentic humanity of which *Laudato si'* speaks (§ 112). The argumentation of intelligence found in this encyclical (§ 112) is accepted in some literature by other authors but very much questioned, especially in the longer term.<sup>69</sup>

The third discourse we can identify from this encyclical, which is fundamental for a spiritual-theological reflection on artificial intelligence, is **logic**. For Pope Francis, logic has long been something artificial and harmful: '*Technology tends to absorb everything into its ironclad logic*' (§108). Logic leads to sexual abuse (§122), to the use of disposable things (§122), is a source of domination over creation (§155), violence (§230), has no concern for the environment (§196), and leaves no room (§196) so that it can be perverse (*logica perversa*) (§197). Rarely in the text can we find a positive logic, the logic of the gift (§ 159).

Logic is understood as a way of creating a narrative of the world, as a relativistic arbitrary creation of interpretive frameworks of rationality in which there is no room for humans. It is not without interest that Floridi shows that logic represents a field of thought that needs to be rebuilt and re-interpreted into a more organic, dynamic form that is more relevant to life.<sup>70</sup> Artificial intelligence works with its logic of 'probability'. A logic in the sense of a sequence of operations that does not allow to come out with a preconceived scheme that depends on trust in itself. Spirituality seems to be the step of abandoning this arbitrary logic, referring to a God standing outside its limits. This—almost anti-Scholastic or anti-Aristotelian—thesis would deserve further analysis in the future. We believe ending the whole encyclical with two prayers is not accidental. Still, it shows the importance of spirituality as a particular opposite conception of logic: '*An integral ecology is also made up of simple daily gestures which break with the logic of violence, exploitation and selfishness.*' (§230) and '*Christian spirituality proposes an alternative understanding of the quality of life, and encourages a prophetic and contemplative lifestyle*' (§222), thus opposing the discourse of logic.

**The encyclical Fratelli tutti (2020)** does not fully address the topic of artificial intelligence, but it contains several essential points. The very notion of technology is included thirteen times in the Italian version of the text. It is supplemented by exciting adjectives—modern (*moderne*) (§ 24), domain-defining (*nella*) (§ 29), new (*nuove*) (§ 258), progressive (*progresso*) (§ 27)—and this even though the resulting tone of the entire encyclical is reserved, though no longer entirely sceptical, towards technology. In the first part of the text, we can perceive a more optimistic discourse, and the relationship between technology and war or socio-economic evil is gradually emphasised.

As for the discourses related to artificial intelligence from the encyclical *Fratelli tutti*, several can be identified, so we will try to outline and complete some of them with a brief commentary and conceptualisation precisely about artificial intelligence.

A discourse of **social injustice and threat**. Technology is something that minimises the costs associated with human labour (§33) and can be a source of abuse and deviance (§167) and, most importantly, a source of some dictate determining how the world can look and function (§177). Technology is seen in § 177 as the efficiency or productivity paradigm source. Here, the human being becomes a means of production or a tool whose performance can be quantified by fitting it into pre-existing categories and structures. The goal of the technological revolution is to remove the human as too high a labour cost, directly impacting their sense of security and value. 'It would be great if the growth of scientific and technological innovation was accompanied by greater equality and social inclusion.' (§ 31)

69 Nick Bostrom, *Superintelligence: Paths, Dangers, Strategies* (Oxford, United Kingdom ; New York, NY: Oxford University Press, 2016).

70 Floridi, *The Logic of Information: A Theory of Philosophy as Conceptual Design*.

Generative AI has raised the same question, only in a more concrete form—it has started to name the fields and professions that will be replaced clearly.<sup>71</sup> Let us consider how tightly linked profession and identity are still in our society. We can say that we may be on the threshold of one of the critical crises of identity and spirituality in general. There is no way to prevent such a change; it is essential to prepare for it—through theological and social reflection.<sup>72</sup>

The second discourse can be described as **moral**. Its content is a critique of how technology enters into human interactions, human actions and human decision-making. Thus, the Pope speaks directly to moral decline (§29) or the decline of ethics (*deterioramento dell'etica*), related to technology alienating society and weakening spiritual values. It is unclear from the text or the context which technologies are directly in question. The point is that technology impacts ethics; it is not value-neutral.<sup>73</sup> The challenge before us is how to create environments and modes of information interaction that are morally acceptable.

In this respect, paragraph 166, in which the Pope stresses that the regulation of technology cannot be aimed at limiting individual partial excesses and punishing them but must be linked to a transformation of institutions and the attitudes of individuals who work with partial technologies and tools. We believe this position is well considered by both Floridi<sup>74</sup> and Bridle, who emphasise the need for new approaches, not analysis of partial problems. At the same time, we can see the crucial emphasis for Francis, namely the focus on a social, ethical or moral perspective,<sup>75</sup> which cannot be separated from the individual. The development of artificial intelligence fundamentally accentuates this view. It can be said that it is clear that it is not possible to reflect the critical challenges of today only individually or only socially, but that we must look for new interaction network models to describe reality and ethics.<sup>76</sup>

The security discourse follows the moral discourse. Technology enables advances in medicine, economics, and the arms industry. Pope Francis' approach to this area has long been distinctly anti-militarist. He clearly states, 'Never has humanity had such power over itself, yet nothing ensures that it will be used wisely' (§258). It must be said that the development of artificial intelligence has the potential to change the structure of warfare and security policy fundamentally.<sup>77</sup> This is one of the themes that, while not resounding as strongly in the public sphere as other areas of security about AI, may be quite fundamental in that it will transform the political and military ordering of the capabilities of individual actors.

The last discourse could be described as **educational-political**. This refers to the fact that there is a change in the distribution of power: '*politics must not be subject to the economy, nor should the economy be subject to the dictates of an efficiency-driven paradigm of technocracy*' (§177).<sup>78</sup> This

71 Necula, 'Artificial Intelligence Impact On The Labour Force—Searching For The Analytical Skills Of The Future Software Engineers'.

72 Halík, *Odpoledne Křesťanství: Odvaha k Proměně*.

73 Michael Stephen Burdett, 'Proximate and Ultimate Concerns in Christian Ethical Responses to Artificial Intelligence', *Studies in Christian Ethics* 36, no. 3 (1 August 2023): 620–41, <https://doi.org/10.1177/09539468231180135>; Sarah Bankins and Paul Formosa, 'The Ethical Implications of Artificial Intelligence (AI) For Meaningful Work', *Journal of Business Ethics* 185, no. 4 (1 July 2023): 725–40, <https://doi.org/10.1007/s10551-023-05339-7>.

74 Luciano Floridi, *The Ethics of Information* (Oxford University Press, 2013), <https://doi.org/10.1093/acprof:oso/9780199641321.001.0001>.

75 W.H. Dutton, *Social Transformation in an Information Society: Rethinking Access to You and the World*, vol. 13 (Paris: UNESCO, 2004).

76 Latour, *Zpátky Na Zem: Jak Se Vyznat v Politice Nového Klimatického Režimu*; B. Latour, *Reassembling the Social: An Introduction to Actor-Network-Theory* (Oup Oxford, 2007); R. Šíp and V. Švec, 'Pojetí tacitních znalostí v paradigmatu sjednoceného pole', *Pedagogická orientace* 23, no. 5 (2013): 664–90; G. Siemens, 'Connectivism: A Theory of Learning for the Digital Age', *International Journal of Instructional Technology and Distance Learning* 2, no. 1 (2005).

77 Mitt Regan and Jovana Davidovic, 'Just Preparation for War and AI-Enabled Weapons', *Frontiers in Big Data* 6 (12 May 2023), <https://doi.org/10.3389/fdata.2023.1020107>; Noel Sharkey, 'Cassandra or False Prophet of Doom: AI Robots and War', *IEEE Intelligent Systems* 23, no. 4 (2008): 14–17, <https://doi.org/10.1109/MIS.2008.60>.

78 This statement is also contained in the previous encyclical *Laudato si'*.

issue is elaborated, for example, by Bělohradský when he says that large companies with technological capabilities, such as Alphabet (Google) or Meta (Facebook), have more power than nation-states.<sup>79</sup> Not only can these tech companies easily manipulate elections and public opinion,<sup>80</sup> but their power is in all respects more significant than that of nation-states; in some respects, they do not need them.<sup>81</sup> Artificial intelligence is leading to the emergence of a society in which these companies will undoubtedly become increasingly important, and it does not seem possible or workable to regulate them sufficiently.

At the same time, with this discourse, the Pope reveals another perspective, every day in academic discussion but still not fully emphasised in Church documents, that of critical thinking, information literacy, i.e., the overall relationship between education, free-thinking and democratic society.<sup>82</sup> He states literally: *'Education and upbringing, concern for others, a well-integrated view of life and spiritual growth: all these are essential for quality human relationships and for enabling society itself to react against injustices, aberrations and abuses of economic, technological, political and media power'* (§ 167).

## Spiritual Perspective in Social Environment

The above analysis of the social encyclicals, as well as of the broader theological framework of the relationship between artificial intelligence and spiritual-social matters, does not, of course, represent a comprehensive or exhaustive map of the whole issue. Still, it does reveal several specific points that can be seen as essential elements for a broader discussion in the Christian thought environment. Although we have focused primarily on papal documents, the conclusions below are ecumenical rather than confessional.

First, it must be stressed that technological change, the Fourth Revolution, as Floridi<sup>83</sup> refers to it, is a natural phenomenon that cannot be disregarded, nor is it reasonable to make a moral judgement about this revolution. What proves to be essential is to consider the impact of such a change on the lives of specific people. The advent of artificial intelligence can further accelerate changes in the labour market, which may have serious social consequences.<sup>84</sup> There is a need to shape a human identity that is not so closely linked to one's work but rather to an authentically experienced humanity; their acquisition and work do not determine the value of a person.<sup>85</sup> This new question of identity needs not only to be fundamentally thought through but also socially implemented.

When Pope Francis speaks of the need for a deeper conceptualisation of a new humanity, of who the man is, he builds on the Council's foundations and states:

*'On a more positive note, if artificial intelligence were used to promote integral human development, it could introduce important innovations in agriculture, education and culture, an improved level of life for entire nations and peoples, and the growth of human fraternity and social friendship. In the end, the way we use it to include the least of our brothers and sisters, the vulnerable and those most in need, will be the true measure of our humanity. An authentically humane outlook and the desire*

79 Bělohradský, *Čas Pléthokracie: Když Části Jsou Větší Než Celky a Světový Duch Spadl z Koně*.

80 Tiffany Hsu, 'For Many Facebook Users, a "Last Straw" That Led Them to Quit', *The New York Times*, 21 March 2018, sec. Technology, <https://www.nytimes.com/2018/03/21/technology/users-abandon-facebook.html>; Allison J. Brown, "'Should I Stay or Should I Leave?': Exploring (Dis)Continued Facebook Use After the Cambridge Analytica Scandal', *Social Media + Society* 6, no. 1 (1 January 2020): 2056305120913884, <https://doi.org/10.1177/2056305120913884>.

81 Bělohradský, *Čas Pléthokracie: Když Části Jsou Větší Než Celky a Světový Duch Spadl z Koně*.

82 P. Jarvis, *Learning to Be a Person in Society* (Routledge, 2009).

83 Luciano Floridi, *The Fourth Revolution: How the Infosphere Is Reshaping Human Reality* (Oxford University Press, 2014).

84 Reich, *The Work of Nations*.

85 Heidegger, *Being and Time*.

*for a better future for our world surely indicates the need for a cross-disciplinary dialogue aimed at an ethical development of algorithms – an algor-ethics – in which values will shape the directions taken by new technologies’<sup>86</sup>*

This description is very modern in emphasising the plurality of religions, opinions or cultures as a critical value to work with. In this conception, Christianity is not the only correct way of believing, but it must play an essential role in critical reflection on the contemporary world. Francis also warns against the variable of the society of men, the society of numbers. Reducing people to data<sup>87</sup> may be tempting, but it must be emphasised that the essence of culture is people with individually embodied, socially shaped stories. The concreteness of reality at the heart of the Easter story (John 13, Luke 22, Matthew 26 and Mark 14) must be substantially connected to the concreteness of each person’s life.

A similar approach can be seen in Hefner, who emphasises the developmental aspect of human nature and the need to reflect religious experience anew in a culturally changing field. For him, spirituality is not a fixed structure but a dynamically constructed phenomenon of a specific environmental adaptation, a cultural-biological evolution.<sup>88</sup> Evolution is not just a biological phenomenon; it has distinctly religious implications that we must also reflect on in light of science and technology development.<sup>89</sup>

Technology can—in *Intelligenza artificiale e pace*—help improve communication and solve many of the problems of the contemporary world. Still, it is when it is designed, implemented and structured in a way that preserves the humanity of the human being. The question of humanity as a dynamic identity, as a testing of limits and constraints, constitutes the core of the process of a new humanity. A humanity integrated into society, culturally, religiously and socially sensitive. The question is not how humans are better than machines, but in the awareness of the reductionist risk. An aspect that is relatively intensely reflected in contemporary modern fiction is a particular expression of the crisis of contemporary modernity. The emphasis of the two encyclicals on the critique of performance culture is significant precisely in the perspective of a newly formed Christian humanism in the post-AI era, which is undeniably one of the themes that would deserve a broader literary and even magisterial analysis in the future.

A fundamental transformation of spirituality as such can be expected. We cannot yet decide on its exact form or forms, whether it will be more socially ritualised,<sup>90</sup> individualised<sup>91</sup> or take another form.<sup>92</sup> The fact is that it seems necessary to strengthen the discourses associated with thinking spirituality in a broad, not necessarily confessional sense, as one of the critical components of one’s ability to live a life in which one sees meaning but also as a kind of hermeneutical key with which to enter into the process of understanding others.<sup>93</sup> It seems that spiritual literacy mani-

86 Francis, ‘LVII Giornata Mondiale Della Pace 2024 - Intelligenza Artificiale e Pace’.

87 Latzer, ‘The Digital Trinity—Controllable Human Evolution—Implicit Everyday Religion’.

88 Philip Hefner, *The Human Factor: Evolution, Culture, and Religion* (Fortress Press, 1993).

89 Jan Sokol, ‘Evoluce Na Různý Způsob’, *Vesmír* 90, no. 10 (2011), <https://vesmir.cz/cz/casopis/archiv-casopisu/2011/cislo-10/evoluce-ruzny-zpusob.html>; Jan Sokol, ‘Biologická a kulturní evoluce [Online]’ (Jan Sokol, 2014), <http://www.jansokol.cz/2014/03/biologicka-a-jan-sokol-člověk-jako-osoba-filosofická-antropologie-třetí-rozšířené-vydání> (Praha: Vyšehrad, 2016).

90 Luckmann, *The Invisible Religion*; Besecke, ‘Seeing Invisible Religion: Religion as a Societal Conversation about Transcendent Meaning’.

91 Bauman, *The Individualized Society*.

92 Halík, *Odpoledne Křesťanství: Odvaha k Proměně*.

93 Maryam et al., ‘A Review Study on Spiritual Intelligence, Adolescence and Spiritual Intelligence, Factors That May Contribute to Individual Differences in Spiritual Intelligence, and the Related Theories’; Åse Holmberg, Per Jensen, and Arlene Vetere, ‘Spirituality – a Forgotten Dimension? Developing Spiritual Literacy in Family Therapy Practice’, *Journal of Family Therapy* 43, no. 1 (2021): 78–95, <https://doi.org/10.1111/1467-6427.12298>; Ivo Jirásek, ‘Spiritual Literacy: Non-Religious Reconceptualisation for Education in a Secular Environment’, *International Journal of Children’s Spirituality* 28, no. 2 (3 April 2023): 61–75, <https://doi.org/10.1080/1364436X.2023.2166467>; Taggart, ‘Spiritual Literacy and Tacit Knowledge’.

fested in lived reflective spirituality may constitute one of the new forms of meaningful religious discourse.

According to Pope Francis, it is necessary to consider the degree of logic and bureaucratism in our society, a theme long associated in Western literature with the tendency of occidental culture to be totalitarian.<sup>94</sup> The documents treat logic as creating often explicitly unreflected policies and measures that reduce the possibility of creativity and a community in which difference is considered valuable.<sup>95</sup>

Education will play a crucial role in this newly formed society. This can be found in studies related to AI literacy,<sup>96</sup> as well as in papal documents. However, it is a topic of a broader nature. As Webster points out,<sup>97</sup> we live in a society in which theory requires the ability to think abstractly and understand broader contexts. In this respect, one can agree with Halík, who links Christianity with rational reflection on faith, identity and spirituality. Education is the way to avoid fundamentalism<sup>98</sup> and requires systematic work on each person's individual development.

At the same time, it appears that we cannot solve many challenges at the individual level. Just as the issue of the environmental crisis and global climate change emerged some time ago, the issue of ethics and the ethical handling of artificial intelligence is now emerging. It seems that it will be increasingly necessary to think of moral theology not just as a question of an individual discipline but to address its social characteristics.<sup>99</sup> Ethics at the personal level is essential but insufficient for thinking through ways of behaving and acting in a digitally transformed world.<sup>100</sup>

The limits of humanity as experienced cannot be understood as a disadvantage or limitation of man in any negative sense. Machines are incapable of resting. They are incapable of idleness or doing things that no one wants them to do; they are incapable of being tired or dying. These elements can be seen as a disadvantage in the job market, but they decisively define humanity as a realistically lived category. Here, the new spiritual emphasis may be related to Augustine<sup>101</sup> or the biblical tradition (Rom 7:20; John 8:11). Humans are—unlike the ancient gods, and we can add technology—capable of death as death; they can give meaning to their lives, Heidegger argues.<sup>102</sup> Jesus came to save sinners, not the righteous and perfect (Mk 2:17; Matt 9:9-13). This area of spirituality, partly mirrored, for example, in the phenomenon of digital equilibrium, still awaits more systematic reflection, however natural it may be as a continuation of the premises of *Laudato si'*.

The last point we can make is to emphasise the question rather than the answer. In contemporary thought discourse, we can see an intense fixation on facts, articles of faith, and particulars that are part of the intellectual endowment of the individual. Artificial intelligence may be perfectly orthodox regarding belief content, but that says nothing about its relationality. Artificial intelligence makes us rethink thinking as a mindless,<sup>103</sup> story—and whole-oriented constant inquiry.<sup>104</sup> An inquiry that can be unnerving but which constitutes the very essence of spiritual identity

94 Bauman, *Modernity and the Holocaust*; Hannah Arendt, *The Origins of Totalitarianism* (Duke University Press, 2007).

95 J. Mestenhauser and C.A. Chambers, 'Interview with Josef Mestenhauser', 1994.

96 Davy Tsz Kit Ng et al., 'Conceptualizing AI Literacy: An Exploratory Review', *Computers and Education: Artificial Intelligence* 2 (2021): 100041, <https://doi.org/10.1016/j.caeai.2021.100041>.

97 Webster, *Theories of the Information Society*.

98 Taggart, 'Spiritual Literacy and Tacit Knowledge'.

99 Jan Sokol, *Etika, život, instituce: pokus o praktickou filosofii* (Praha: Vyšehrad, 2014); Sokol, *Člověk jako osoba: filosofická antropologie. Třetí, rozšířené vydání*; Dutton, *Social Transformation in an Information Society: Rethinking Access to You and the World*.

100 Floridi, *The Ethics of Information*.

101 Augustine, *The Confessions of St. Augustine: Modern English Version* (Revell, 2008).

102 Martin Heidegger, *Erläuterungen zu Hölderlins Dichtung* (Klostermann, 1944).

103 Ladislav Hejdiánek, *Nepředmětnost v myšlení a ve skutečnosti* (Praha: Oikoymenh, 1997).

104 Martin Heidegger, *What Is Called Thinking?* (HarperCollins, 1976).

(Heb. 11:1-7)—an identity without possession but with living.<sup>105</sup>

This analysis shows that the problem of artificial intelligence cannot be viewed as a limited particularity without reference to religious experience. Artificial intelligence is a phenomenon that disrupts the sense of certainty of the form of how the world works and the decadent idea of who one is.<sup>106</sup> It is essential to take these concerns seriously; we can neither see the potential of these tools nor how they will affect the labour market and other areas of human realisation.<sup>107</sup> We believe that it makes sense in the field of spiritual-theological reflection to both see the themes outlined as some essential perspectives on the issues and, at the same time, to work actively with a phenomenologically oriented methodological approach—to reflect on how authentic spirituality is possible for each person. At the same time, postmodernism offers a layered narrative of concepts and experiences that can help with the search for a new, maybe vague or unfixed, lived spirituality. Bauman<sup>108</sup> and Špidlík<sup>109</sup> are surprisingly close here.

## Conclusion

In our study, we have tried to show that the development of artificial intelligence can be the subject of various theological and philosophical discussions but that it has a clear impact on the way of thinking about the Church's social doctrine. Technological changes put before us the question of the formation of a new conceptualisation of humanism as a dynamic structure of authentic humanity, integrating the limits and weaknesses of man, his failures in an environment of economy and technological change, into his most proper being. There seems to be a fundamental rejection of both 'performance Christianity' and reductionist approaches to the human person. Man is not reducible to data, nor is he a set of work results, but a being having a spirituality that takes place in concrete experience.

At the same time, however, technology and the phenomenon of the Fourth Revolution<sup>110</sup> as such cannot be reflected only negatively or pessimistically—new technologies open up the issue of diversity in social services and consultation, can create working conditions for new employees, including those whose geographical migration linked to work is limited for various reasons, and can make a significant contribution to the development of communication and critical thinking, which the papal documents systematically emphasise.

Latour<sup>111</sup> says that we need to completely change some of our perspectives and ideas about what particular phenomena and practices in the world should or should not look like. Modernity has hit its limits; we have never been truly modern,<sup>112</sup> and we must learn to seek humanity and spirituality anew, in a completely different way, in the context of social and technological change. We seem to be standing at the moment of a revolution in spirituality that we still cannot see but from which we cannot close ourselves off. Otherwise we will die alone and abandoned, like the parents of Gregor Samsa in Kafka's *The Metamorphosis*.<sup>113</sup>

105 Erich Fromm, *To Have or To Be?* (Open Road Media, 2013).

106 Hefner, *The Human Factor*.

107 Tyna Eloundou et al., 'GPTs Are GPTs: An Early Look at the Labor Market Impact Potential of Large Language Models' (arXiv, 21 August 2023), <https://doi.org/10.48550/arXiv.2303.10130>; A. Zarifhonarvar, 'Economics of Chatgpt: A Labor Market View on the Occupational Impact of Artificial Intelligence', 2023.

108 Bauman, *Liquid Modernity*.

109 Špidlík and Rupnik, *Integrální poznání*.

110 Floridi, *The Fourth Revolution: How the Infosphere Is Reshaping Human Reality*.

111 Latour, *After Lockdown*.

112 Latour, *We Have Never Been Modern*.

113 Latour, *After Lockdown*.

**Contact**

***Assoc. Prof. Dr. Michal Černý***

Masaryk University

Faculty of Arts

Information and Library Studies

Arne Nováka 1, 602 00 Brno, Czech Republic

[mcerny@phil.muni.cz](mailto:mcerny@phil.muni.cz)

# The Word without a Speaker? Scripture, Its Meaning, and the Challenge of Large Language Models

Jiří Dosoudil<sup>1</sup>

DOI: 10.32725/cetv.2026.005

## Abstract

Recent developments in AI, particularly LLMs, have brought renewed attention to hermeneutical questions concerning how meaning arises in language and whether it depends on the intention of a speaking subject. Against this background, the present study asks how Scripture can be understood as the Word of God in a context where language demonstrably functions without a speaker, arguing that this situation challenges modern logocentric models of meaning rather than theological conceptions of Scripture. Methodologically, the article combines philosophical analysis of language, biblical-theological examination of the concepts of *dābār* and *logos*, and systematic-theological reflection, using contemporary engagements with LLMs to clarify the distinction between textual meaning and the Word as an event of address. It concludes that Scripture need not be understood as a repository of divine intention, but as a medium through which the Word takes place in the act of reading as address and response. These conclusions have implications for contemporary theological reflection and practice, supporting a responsible use of AI as an interpretive aid that clarifies the limits of meaning-based interpretation.

**Keywords:** Scripture, Word of God, Logocentrism, Large Language Models, Artificial Intelligence, Address.

## Introduction

Artificial intelligence (AI) has become one of the most influential forces shaping the contemporary world, affecting how people work, communicate, and make sense of their surroundings. Among its most significant developments is the rise of large language models (LLMs), systems trained on extensive textual corpora to generate fluent and contextually appropriate language. What distinguishes these systems is not merely the level of their technical sophistication, but the fact that they produce meaningful linguistic output without a speaking subject or communicative intention.

This phenomenon raises a fundamental hermeneutical question. Much contemporary interpretation—often without explicit reflection—continues to assume that meaning is ultimately

---

<sup>1</sup> This work has been supported by Charles University Research Centre program No. UNCE/24/SSH/019.

grounded in the intention of a speaking subject. If language can nevertheless function coherently and productively without such a subject, how does meaning arise at all, and how is it then to be understood? In Christian theology, this question acquires particular urgency, since Scripture has traditionally been interpreted in relation to a speaking source—above all, God as its divine author. As the Word of God, Scripture has often been understood as a form of language whose meaning is inseparable from divine agency.

This study addresses this tension by asking a central theological question: how can Scripture be understood as the Word of God in a context where language demonstrably functions without a speaker? It is not intended to provide an overview of LLM research or their technological development. Rather, LLMs serve here as a heuristic case that brings into sharper focus hermeneutical assumptions about language, meaning, and authorship in relation to Scripture. Specifically, the article argues that the phenomenon of LLMs challenges not the biblical understanding of the Word of God, but a modern, logocentric account of meaning that identifies meaning with the intention of an originating subject. When this assumption is destabilised, what comes into view is not a crisis of Scripture, but a clearer distinction between semantic articulation and the event of the Word. On this basis, the article proposes that Scripture may be read not as a repository of divine intention, but as a medium through which the Word takes place as an enacted address in the present act of reading.

## Methodology

This study employs a conceptual and hermeneutical methodology grounded in philosophical analysis of language, biblical theology, and systematic-theological reflection. The argument proceeds in three stages. First, selected modern accounts of meaning and interpretation are examined, with particular attention to logocentric and intentionalist assumptions and their critique in contemporary philosophy of language. Second, key biblical concepts of the Word (*dābār*, *logos*) are analysed in their canonical contexts in order to outline a non-logocentric understanding of divine speech. Third, insights drawn from these analyses are brought into dialogue with contemporary uses of LLMs.

The discussion of LLMs therefore serves primarily as a heuristic case that makes visible certain structural features of language and interpretation. Rather than being treated as a technical object of investigation, AI helps to illuminate the possibilities and limits of interpretation based solely on semantic articulation. The methodological aim of the study is to clarify the ontological and hermeneutical conditions under which Scripture may be read as the Word of God in a contemporary context shaped by machine-based text processing.

## 1. Large Language Models and the Displacement of the Speaking Subject

As already indicated, LLMs have recently become a significant presence in discussions of language and interpretation, particularly because of the questions they raise concerning the generation of meaning. They produce linguistic output not by expressing communicative intention, but by extending statistical patterns derived from their training data. Operating solely over distributions of linguistic forms, they are capable of generating text that appears coherent and meaningful while lacking understanding, semantic grounding, or reference to the world.<sup>2</sup> Such systems therefore

2 Emily M. Bender et al., 'On a significant presence in discussions of language and interpretation, particularly due to the Dangers of Stochastic Parrots: Can Language Models Be Too Big?', *FAccT '21* (2021): 610–611, <https://doi.org/10.1145/3442188.3445922>.

function without any speaking subject who intends meaning and without any model of the world or the reader that could serve as a basis for communicative intent.<sup>3</sup>

Describing LLM output as speech without a speaking subject does not imply that such systems lack human origins. Indeed, the models themselves are designed and trained by human agents and rely on vast corpora of human-produced texts. In this sense, they reflect the intentions of their designers and remain clearly embedded within human cultural and technological practices. The present argument, however, concerns a different level of analysis: the production of a particular linguistic utterance. As it is generated solely through probabilistic continuations of linguistic patterns learned from large textual corpora,<sup>4</sup> human intentions remain present at the most general level of training data and system design, but they do not function as a guiding intention shaping the discourse articulated in the model's responses. What makes such systems philosophically instructive is precisely that they generate linguistically coherent output without being grounded in a single determinate authorial intention that governs the discourse.

For the present inquiry, the significance of LLMs lies in the pressure they place on a widespread hermeneutical assumption: that textual meaning is determined by the intention of an originating subject. If coherent discourse can emerge without such intention, then intention cannot be treated as the sole ground of meaning. Texts exhibit a capacity to articulate sense through their own linguistic structures. The issue becomes theologically significant where Scripture is read as the Word of God and its meaning is commonly related to divine intention. How, then, is divine intention to be understood in relation to a text whose meaning is articulated through structures that exceed any single originating will?

Addressing this question requires looking beneath particular theological claims to the broader assumptions that shape how language, meaning, and authorship are conceived. The following section, therefore, introduces the framework that has historically informed intention-based accounts of meaning, to clarify what is at stake in reading Scripture as the Word of God.

### 1.1 Logocentrism and the Intention-Based Model of Meaning

The assumptions that underlie modern accounts of intention, authorship, and meaning are commonly organised within the framework known as *logocentrism*—a pattern of thought in which meaning is grounded in the presence of a speaking subject. Within this framework, language is understood to express an inner consciousness that has direct access to reality, and meaning is secured by reference to an originating intention. Texts, by contrast, are treated as secondary and derivative: mediated traces of a prior act of meaning rather than sites in which meaning is constituted.<sup>5</sup>

Logocentrism is not a single doctrine, but a widespread configuration rooted in the belief that language expresses an inner consciousness with direct and stable access to reality. This belief has shaped Western theories of language and interpretation. Its central feature is the privileging of speech as the primary locus of meaning, based on the assumption that the living voice provides

3 Bender et al., "On the Dangers," 616.

4 David J. Gunkel, "Large Language Models," in *Understanding AI: A Critical Introduction for the Humanities and Social Sciences*, forthcoming (Cambridge: Polity Press, 2026), preprint, 2–4, 9–10, available at SSRN, <https://ssrn.com/abstract=5406622>.

5 The term logocentrism was introduced in early twentieth-century philosophy, most notably by Ludwig Klages (see Jason Josephson-Storm, *The Myth of Disenchantment: Magic, Modernity, and the Birth of the Human Sciences* (Chicago: University of Chicago Press), 221), and later gained wider currency through Jacques Derrida's critical engagement with it (see below). While the term itself is relatively recent, the orientation it names reaches back to classical philosophy, where speech was frequently treated as the privileged medium of meaning and writing as secondary or derivative.

immediate access to intention, truth, and presence, whereas writing is distanced from its source. In Jacques Derrida's critical account, this hierarchy reflects a broader metaphysics of presence, in which text is regarded as technical, derivative, and lacking constitutive semantic force, while spoken language is bound to the presence of a conscious subject.<sup>6</sup> Such a hierarchy underwrites the familiar expectation that meaning originates in the mind of an author and that texts function as imperfect vehicles for expressing an interior intention.

This configuration has also shaped modern biblical hermeneutics. Interpretation is frequently conceived as the recovery of an original meaning that stands behind the text, whether attributed to a human author or to God as its divine source. Appeals to 'what the author meant' presuppose that intention determines what the text truly means and that interpretive disagreement reflects varying degrees of access to that intention. As Vanhoozer observes, much modern biblical interpretation continues to operate within this intention-based model, in which the task of the interpreter is to recover the intention that stands behind the text and is taken to determine its meaning.<sup>7</sup>

## 1.2 The Collapse of Logocentrism: From Derrida to LLMs

As mentioned, Jacques Derrida subjects the logocentric configuration just described to a sustained critique. He destabilises the hierarchy that treats speech as the privileged site of meaning. Rather than accepting the traditional distinction between an originating presence—the speaking subject—and the secondary trace of writing, Derrida argues that writing participates in the same structures that make meaning possible. As he observes, 'the system of language associated with phonetic-alphabetic writing is that within which logocentric metaphysics, determining the sense of being as presence, has been produced.'<sup>8</sup>

From this perspective, meaning does not arise from the immediacy of a speaker's consciousness, but from the differential relations (*différance*) that constitute language itself. As Jonathan Culler explains in his account of Derrida's critique of logocentrism, meaning emerges from relations within language rather than from a single originating intention.<sup>9</sup> Linguistic expressions gain meaning only through their relations to other expressions within a system that no author can fully govern. Authorial intention, therefore, cannot guarantee or exhaust the meaning of a text. Texts signify not only what their authors aimed to communicate, but also what emerges through the internal relations, ambiguities, and possibilities of language.<sup>10</sup>

What Derrida describes philosophically is rendered empirically visible by contemporary LLMs. As David Gunkel observes, such systems produce coherent linguistic expressions without any speaking subject, intention, or consciousness. They generate text entirely through statistical operations over linguistic differences, without appealing to a model of the world, a communicative

6 See Jacques Derrida, *Of Grammatology*, trans. Gayatri Chakravorty Spivak (Baltimore: Johns Hopkins University Press, 1976), chapters 1–2, esp. pp. 11–12.

7 Kevin J. Vanhoozer, *Is There a Meaning in This Text? The Bible, the Reader, and the Morality of Literary Knowledge* (Grand Rapids: Zondervan, 1998), under the heading 'Voice: A Speaking Presence'; see also "Undoing Philosophy" for Vanhoozer's related discussion of logocentrism and authorial intention. Vanhoozer here articulates the philosophical assumptions of authority that he later applies explicitly to biblical hermeneutics.

8 Derrida, *Of Grammatology*, 43.

9 Jonathan D. Culler, *On Deconstruction: Theory and Criticism after Structuralism* 25th anniversary ed. (Ithaca: Cornell University Press, 2007), 92–94. Culler here summarises Derrida's account of logocentrism as the view that meaning is grounded in the speaker's conscious presence and that authorial intention is treated as the assumed source of a sign's significance.

10 *Ibid.*, 44–45, 50–51.

aim, or an originating mind.<sup>11</sup> In doing so, they reveal an extreme but clarifying case of language functioning independently of authorial presence.<sup>12</sup> Rather than constituting anomalies, LLMs expose a structural possibility within language itself: that meaningful discourse can emerge without a speaker.

This analysis indicates that the modern tendency to ground textual meaning primarily in authorial intention is neither an intrinsic feature of language nor a theological necessity. This does not imply that texts fail to communicate or that intention is irrelevant; it does, however, call into question the assumption that intention alone exhausts the meaning of a text. For biblical interpretation, the central issue is therefore not whether Scripture conveys a divine message, but how the Word of God is present and effective through a text whose linguistic meaning exceeds any single originating will. In this sense, the challenge posed by LLMs brings a deeper hermeneutical and theological issue into focus. If meaning is not simply transferred from speaker to text, in what way—and by what mode—is Scripture to be understood as the Word of God? Addressing this question requires closer attention to the biblical conception of the Word itself, to which the next section now turns.

## 2. The Word as Divine Action

Understanding what Scripture as the Word of God means cannot be captured solely in terms of theories of meaning or communication. It requires a shift in perspective: from questions of intention and textual meaning to the theological concept of the Word itself. Accordingly, the present section explores the biblical and traditional contexts in which this notion is articulated.

Within biblical and ecclesial usage, the term Word of God does not simply refer to words once spoken by God, nor to a recoverable content of divine intention. Rather, it denotes a dynamic and relational reality: a mode of God's engagement with the world mediated through language, proclamation, and text. In the Hebrew Scriptures, this understanding is articulated primarily through the semantic field of דָּבָר (*dābār*), which, alongside utterance, also denotes event, matter, and effective action, thereby resisting a strict separation between word and deed.<sup>13</sup> At the same time, the New Testament adopts the term λόγος (*logos*), a concept shaped by the Greek intellectual tradition but reconfigured within a biblical horizon. The present section, therefore, attends first to the Old Testament conception, before briefly considering the New Testament term in light of this framework.

What is at stake here is not primarily the origin of particular utterances, but the manner in which God acts, addresses, and makes himself present through the Word across time.<sup>14</sup> It is within this conceptual horizon that the biblical understanding of the Word must be examined by attending to several recurrent features that emerge across the scriptural witness.

11 David J. Gunkel, 'The différence engine: large language models and poststructuralism', *AI & Society* (2025), forthcoming, see Introduction and '3. LLMs as mechanisms of différence', <https://doi.org/10.1007/s00146-025-02640-z>.

12 Ibid., '4.1 Deconstruction of logocentrism' and '4.2 The death of the author'.

13 Frank Ritche Ames, '1819 (דָּבָר)', in *New International Dictionary of Old Testament Theology and Exegesis*, ed. Willem A. VanGemeren (Zondervan, 1997), 1:912–5.

14 For a dogmatic account of the Word of God as an event rather than a collection of divine utterances, see Karl Barth, *Church Dogmatics I/1* (London: T&T Clark, 2009), 140–159. Within Catholic theology, a comparable emphasis is articulated in the Second Vatican Council's description of Scripture and Tradition as a single sacred deposit of the Word of God (cf. *Dei Verbum* 7–10, esp. 10).

## 2.1 The Word in the Hebrew Scriptures (*dābār*)

The Old Testament does not offer a single abstract definition of the Word, but portrays it through recurring patterns of action and address. For the present argument, three characteristics are particularly significant.

First, the Word of God is consistently depicted as an effective act. In the creation narratives, it does not merely convey information or describe an already existing reality, but brings reality into being. In Genesis 1:3, we read, ‘God said, “Let there be light”, and there was light.’ The same logic is reiterated elsewhere: ‘By the word of the Lord the heavens were made and all their host by the breath of his mouth’ (Ps. 33:6).<sup>15</sup>

This performative character of the Word is not confined to the primordial act of creation, but recurs throughout Scripture wherever the Word is portrayed as accomplishing what it declares. The Word brings reality into being through speech alone (Gen. 1:3–5), summons life where there is none (Ezek. 37:4–6), executes judgment (Hos. 6:5), and brings about restoration (Isa. 55:10–11). In these contexts, the significance of the Word lies not in the communication of meaning, but in its operative power. It does not await reception to become effective, but acts by being spoken.<sup>16</sup>

Second, the Word functions as an address. In call narratives, standing at the threshold of the prophetic tradition, it confronts particular individuals and places them in a new relation that did not previously exist. ‘Now the Lord said to Abram, “Go from your country...”’ (Gen. 12:1), and similarly, in the call of Moses (Ex. 3–4)—often regarded as paradigmatic for later prophetic vocation—the Word summons, commissions, and insists even in the face of resistance. What is striking in these texts is that the authority of the address does not depend on dialogical exchange or on the addressee’s prior access to the speaker’s identity or intention. Moses takes the voice that addresses him seriously and responds to its claim before knowing who precisely speaks or on what grounds such authority rests. The relation is not the precondition of obedience; it is constituted through the act of address itself.<sup>17</sup>

This pattern becomes even clearer in prophetic formulas such as ‘Now the word of the Lord came to me’ (Jer. 1:4; see also Ezek. 1:3; 3:16).<sup>18</sup> Here, the Word appears as an agent that encounters, confronts, and commissions.<sup>19</sup> It acts upon its addressee as a reality in its own right; address is grounded not in the transparency of intention but in the force of the encounter itself.

A similar dynamic is evident in the call of Samuel. In 1 Samuel 3, the narrative explicitly notes that ‘Samuel did not yet know the Lord, and the word of the Lord had not yet been revealed to him’ (v. 7). Nevertheless, the address claims his attention and obedience before any clear recognition of its source.<sup>20</sup> Here again, the authority of the Word precedes relational knowledge and interpretive

15 See also Ps. 148:5; Rev 4:11.

16 On the performative and effective character of the Word in the Hebrew Bible, see, e.g. Walter Brueggemann, *Theology of the Old Testament* (Minneapolis: Fortress Press, 1997), 146–153; John Goldingay, *Old Testament Theology*, vol. 1 (Downers Grove: InterVarsity Press, 2003), 49–61.

17 Accordingly, Moses’ objections concern his role and ability to respond, as well as repeated attempts to withdraw from the commission, not the legitimacy of the address as such. On prophetic vocation in general, as a divine address that establishes a radically new situation and effects a decisive break with previous modes of life, see Gerhard von Rad, *Old Testament Theology*, vol. II: *The Theology of Israel’s Prophetic Traditions*, trans. D. M. G. Stalker (New York: Harper & Row, 1965), 56–58.

18 See also Hos. 1:1; Joel 1:1; Jonah 1:1.

19 Claus Westermann, *Basic Forms of Prophetic Speech* (Louisville: Westminster John Knox Press, 1991), 90–98.

20 Eric J. Tully, *Reading the Prophets as Christian Scripture* (Grand Rapids: Baker Academic, 2022), within the section ‘Israel in the Wilderness and in the Land’.

certainty, and the relation is constituted through the address rather than presupposed by it.<sup>21</sup>

Third, the Word exceeds the moment of utterance and functions as a temporally extended reality with its own agency. In biblical testimony, it is not exhausted in the act of being spoken, nor is its efficacy bound to the continued presence of a speaker or to the recoverability of an originating intention. ‘The word of our God will stand forever’ (Isa. 40:8): once uttered, it persists, unfolds, and continues to act across time as a reality in its own right (cf. Ps. 33:6–11; 147:15–18).<sup>22</sup>

The enduring efficacy of the Word is articulated most explicitly in prophetic reflection. According to Isaiah, God declares: ‘So shall my word be that goes out from my mouth; it shall not return to me empty, but it shall accomplish that which I purpose and succeed in the thing for which I sent it’ (Isa. 55:11). The Word is sent, performs its work, and achieves its end independently of the moment of address. Its force lies not in repetition or renewed authorisation, but in its own operative continuity.<sup>23</sup>

Accordingly, the Word confronts new situations and new audiences long after its initial utterance. Words of the Lord spoken in the past remain binding and active when remembered, written, read, and re-appropriated (cf. Deut. 30:11–14; Jer. 36; Ezek. 33:30–32). Their originating intention is not reconstructed; instead, they traverse temporal distance and historical mediation without reducing their meaning and authority to the immediacy of a present speaker.<sup>24</sup>

## 2.2 The Word as *logos* in the New Testament

The New Testament continues to speak of the Word of God in ways that closely resonate with the Old Testament conception of *dābār*.<sup>25</sup> The corresponding term, *logos*, is generally portrayed as an active and enduring reality that confronts human beings and shapes their lives.

This is particularly evident in passages reflecting on Scripture itself. In 2 Timothy 3:16–17, Scripture is described as θεόπνευστος, ‘God-breathed’; it is effective for teaching, correction, and formation. Similarly, Hebrews 4:12 characterises the word of God as ‘living and active’, capable of addressing and discerning the human heart. In both cases, the Word functions as an agent rather than as a neutral vehicle of information.<sup>26</sup> This continuity with the Old Testament is further reinforced by Jesus’ declaration that ‘heaven and earth will pass away, but my words will not pass away’ (Matt. 24:35), which echoes prophetic affirmations of the enduring power of God’s word (cf. Isa. 40:6–8).<sup>27</sup>

At the same time, the New Testament introduces a decisive novelty: God’s Word is confessed not only in speech or Scripture, but as becoming embodied in a human life. In the Johannine writings, ‘the Word became flesh’ (John 1:14). Here the term *logos* draws on the Greek philosophical tradition, in which it denoted rational principle and intelligible order; yet this conceptual background does not determine its biblical meaning. Rather, the term is reshaped within the horizon already

21 For comparable instances where the authority of the address precedes clear recognition of the speaker, cf. Judg. 6:11–18; 1 Kings 19:9–13.

22 Cf. Goldingay, *Old Testament Theology*, 436–438.

23 See also Isa. 9:8; 45:23; Zech. 1:6. See von Rad, *Old Testament Theology*, 80–98. Von Rad describes prophetic word as an objective, compelling reality that creates vocation, binds the prophet beyond the moment of address, and remains effective independently of prior religious experience or personal intention.

24 For the transmission and re-actualisation of the Word in textual and communal contexts, see Jer. 36; Neh. 8:1–8; Dan. 9:2.

25 Ames, ‘1819 (רבר)’.

26 Cf. also Luke 1:1–2, where the gospel tradition is grounded in the testimony of ‘eyewitnesses and servants of the word’, suggesting a conception of the Word as a living reality rather than as an abstract semantic content. See also Luke 11:28, which links the Word of God with hearing and practice (ἀκούειν, φυλάσσειν), underscoring its formative rather.

27 See also 1 Pet. 1:25.

established by Scripture.<sup>28</sup> The incarnate Logos is described as pre-existent, creative, and life-giving: ‘all things came into being through him’; ‘in him was life’ (John 1:3–4). In this way, the logos is closely aligned with the functions attributed to *dābār* in the Hebrew Scriptures. The decisive claim that “the Word became flesh” thus directs attention towards concrete presence and action. Although the Johannine Logos cannot be equated with Scripture as text, it participates in the same theological logic: the Word of God as a living, operative reality that gives life and addresses human beings (cf. John 6:63).

Taken together, these biblical witnesses present the Word of God as a dynamic and operative reality that cannot be reduced to a momentary utterance, a recoverable intention, or a static deposit of meaning. Whether articulated through *dābār* in the Hebrew Scriptures or through *logos* in the New Testament, the Word acts, addresses, endures, and transforms across time. This biblical conception of the Word provides the necessary background for reconsidering our original question, to which the following section now turns.

### 3. The Ontology of the Word and the Question of Meaning

The biblical characterisation of the Word developed in the preceding section is not merely descriptive of scriptural language, but corresponds to the way in which Christian theology has traditionally understood the Word of God. This conviction emerges from the canonical shaping of Scripture itself (see esp. 1 Thess. 2:13).<sup>29</sup> As inspired into Scripture, the Word has likewise been understood as an acting, addressing, and enduring reality. It is precisely this understanding of the Word that illuminates the central question of the present inquiry: if meaning emerges from Scripture’s linguistic structures rather than from the presence or intention of a speaking subject, how does the Word of God operate through the text?

Addressing this question requires moving beyond the level of interpretive method to the deeper metaphysical assumptions that underlie competing accounts of meaning. As discussed above, logocentrism is inseparable from a metaphysics that grounds meaning in presence—whether the presence of the speaker, consciousness, or an originating intention. By contrast, the biblical understanding of the Word as an event of address presupposes a different metaphysical framework altogether, one in which meaning is not secured by prior presence but emerges within the act of address itself.

What is at stake, therefore, is not merely an alternative interpretive strategy. Rather, the following analysis suggests a shift at the level of ontology in how Scripture may be understood as the Word of God—a shift that stands in tension with logocentric accounts of meaning and requires a reconfiguration of how text, meaning, and divine action are conceived. The sections that follow seek to articulate this framework more explicitly, first by identifying the conditions under which the Word is actualised and then by clarifying the role the text plays in that process.

28 See James D. G. Dunn, *Neither Jew nor Greek: A Contested Identity*, Christianity in the Making, vol. 3 (Grand Rapids: William B. Eerdmans Publishing Company, 2015), ch. 43, under the heading ‘iii. Jesus Is the Divine Word and Wisdom’, esp. the discussion of John 1:1–18. Dunn emphasises that the Johannine Logos draws on familiar Jewish conceptions of the word of God as an effective divine utterance (Gen. 1; Ps. 33:6; Isa. 55:11), while simultaneously subverting Greek expectations by the claim that ‘the Word became flesh’.

29 Cf. Brevard S. Childs, *Biblical Theology of the Old and New Testaments: Theological Reflection on the Christian Bible* (Minneapolis: Fortress Press, 1993), 70–79.

### 3.1 The Conditions of the Word's Actualisation: Address and Subjectivity

It has been indicated that within the biblical framework, the actualisation of the Word is fundamentally relational: it takes place only as address. The characteristics of the Hebrew *dābār* discussed above show that address is not an accidental or merely rhetorical feature of the Word, but an ontological one. The Word does not first exist as meaning and only subsequently reach an addressee; rather, it exists precisely in the act of addressing.

This implies that the Word presupposes subjectivity on the side of the addressee. The Word does not become untrue when it is not received, but remains unrealised. To be addressed means not merely to understand a message, but to be situated within a relation that calls for response. As discussed by Nicholas Wolterstorff, subjectivity in this sense denotes the capacity to be claimed, questioned, or transformed by address.<sup>30</sup> Without such subjectivity, the Word cannot take place, even if the text itself is fully intelligible.

This distinction between understanding and address is crucial. Semantic comprehension alone does not constitute the occurrence of the Word, since it actualises meaning without establishing relation. The Word takes place only where understanding becomes response.<sup>31</sup> This distinction will prove decisive when considering forms of textual engagement that exhibit high levels of understanding while remaining structurally incapable of being addressed.

This emphasis on address and response resonates with speech-act approaches to Scripture, which likewise seek to move beyond a static conception of meaning. At the same time, such approaches often continue to frame the action of the Word primarily in terms of communicative acts grounded in authorial intention.<sup>32</sup> The account proposed here shifts the focus more decisively towards the ontology of address itself, in which the Word is actualised not through the recovery of intention but in being received and answered as address.

### 3.2 The Text as the Medium of the Word's Action

If the Word is actualised as an event of address that presupposes subjectivity, this has direct implications for the role of the text itself. Within the biblical framework, Scripture does not function as a container in which divine meaning is stored, nor as a deposit of information awaiting correct retrieval.<sup>33</sup> Rather, it serves as a medium through which the Word may take place. The text neither guarantees nor exhausts the occurrence of the Word, but enables the possibility of address across time and contexts.

This understanding also reframes the relation between divine intention and textual meaning. Divine intention is not embedded in the text as a determinate semantic content to be reconstructed by interpretive effort. It is realised in the act of the Word itself, as it addresses and engages its addressee through the text. What is often perceived as a problem within logocentric models of

30 Nicholas Wolterstorff, *Divine Discourse: Philosophical Reflections on the Claim That God Speaks* (Cambridge: Cambridge University Press, 1995), 54–57. Wolterstorff's distinction between presentational and authorial discourse clarifies how divine speech may be genuinely addressed to human addressees without presupposing a recoverable authorial intention embedded in the text. While his account remains philosophical in scope, it helps to illuminate the mode of address that the biblical framework developed here specifies theologically.

31 For a concise theological articulation of this claim in the context of Scripture, reception, and artificial intelligence, see Jiří Dosoudil, 'Slovo v datech. O Bibli v digitálních formátech, víře a jejich setkávání', *MKR Communio* 116, no. 3 (2025): 10–12, 15–18 (in Czech).

32 Vanhoozer, *Is There a Meaning*, ch. 7–8.

33 See Wolterstorff, *Divine Discourse*, 25–31. Wolterstorff's distinction between presentational and authorial discourse clarifies how divine speech may be genuinely addressed to human addressees without presupposing a recoverable authorial intention embedded in the text. While his account remains philosophical in scope, it helps to illuminate the mode of address that the biblical framework developed here specifies theologically.

interpretation—namely, that meaning exceeds any single originating intention—thus proves to be a condition of the Word’s ongoing operability rather than a threat to it.

From this perspective, the destabilisation of logocentric accounts of meaning does not entail a crisis in reading Scripture as the Word of God. Because the Word operative in Scripture is not a form of stored or recoverable meaning, it does not depend on the presence or intention of a speaking subject for its efficacy. Meaning is neither fixed behind the text nor reconstructed from it; rather, it takes place as enacted address in the present act of reading. The consequences of this shift, however, extend beyond hermeneutical theory. They call into question interpretive models that continue to treat Scripture as a repository of determinate meanings and invite a reconsideration of what the collapse of logocentric assumptions—made newly visible through contemporary engagements with AI—means for the reading of Scripture today.

#### 4. Discussion: AI, Scripture, and the Limits of Logocentric Reading

The preceding analysis has shown that the advent of LLMs and the collapse of logocentrism do not pose a threat to the reading of Scripture as the Word of God, but bring new insights into it. These insights, however, cannot remain confined to hermeneutical theory alone. The question that now arises concerns the practical structure of interpretation itself: what different forms of engagement with the biblical text actually do, what they can and cannot achieve, and how they relate to the enactment of the Word in reading.

In this respect, contemporary uses of AI are especially instructive. LLMs, as a concrete and increasingly widespread mode of textual engagement, make visible both the continuing necessity of working with textual meaning and the point at which such work reaches its limits. The following discussion, therefore, focuses on how these practices help to clarify the place of meaning, address, and response in reading Scripture as the Word of God today.

First, it must be emphasised that even after the collapse of logocentric assumptions, the interpretive engagement with the textual meaning of the Scripture remains indispensable. Reading the Bible still presupposes attention to language, structure, and coherence, without which the text could not be meaningfully approached. What changes, however, are the expectations placed upon interpretation. It no longer aims to recover a divine intention presumed to stand behind the text, nor to secure a determinate meaning as the final locus of the Word. Rather, interpretation articulates the semantic sense through which the text becomes intelligible and capable of addressing the reader. It yields not the presence of the Word itself, but the clarification of the textual conditions under which the Word may take place. In this respect, LLMs provide a vivid and concrete illustration of the interpretive phase just described. Operating exclusively on the level of textual data, they excel at articulating semantic relations, tracing patterns of usage, and rendering the sense of a text explicit and accessible. Their outputs demonstrate that meaningful interpretation does not depend on access to authorial intention, but can emerge from the internal dynamics of language itself. Contemporary interactions with AI thus make visible a form of interpretation that is both legitimate and effective: the articulation of textual meaning without reference to a speaking subject behind the text. At the same time, the way in which LLMs operate helps to locate a decisive transition within the reading of Scripture. The articulation of textual meaning—however precise—remains a preparatory moment. It renders the text capable of addressing a reader, but it does not yet constitute the Word of God. The Word takes place only where articulated sense is received as address and met with response. This moment cannot be automated or delegated, not because it lies beyond

interpretation, but because it presupposes a responding subject. AI-assisted interpretation, therefore, clarifies, rather than replaces, the point at which reading Scripture becomes an event of the Word. Seen in this light, the distinction illuminated through contemporary engagements with AI does not stand in opposition to classical theological accounts of the multiple senses of Scripture. Rather, it helps to rearticulate them in non-logocentric terms—not as layers of meaning contained within the text, but as modes of reading enacted in the event of address.<sup>34</sup>

Contemporary encounters with AI thus serve less to transform the reading of Scripture than to clarify its limits. Rather than introducing a new method of interpretation, they bring into focus what interpretation can and cannot achieve. By demonstrating how far the articulation of textual meaning can proceed independently of address, AI helps to distinguish interpretive competence from the occurrence of the Word itself. In this way, the limits disclosed by AI help to identify the point at which reading Scripture as the Word of God begins: where the text, already rendered intelligible, is received as an address and answered in response.

## Conclusion

This article has examined how contemporary developments in AI, particularly LLMs, challenge modern intention-based and logocentric accounts of meaning and their implications for reading Scripture as the Word of God. More specifically, it has asked how Scripture can be understood as the Word of God in a context where language demonstrably functions without a speaking subject or communicative intention.

The argument has proceeded in three steps. First, LLMs were introduced as an extreme case of language operating independently of authorial presence. Second, philosophical critiques of logocentrism were examined in order to clarify the assumptions about meaning and intention that shape modern hermeneutics. Third, the biblical concepts of the Word (*dābār*, *logos*) were re-examined as pointing toward a different understanding of language, in which the Word is not a deposit of intention but an event of address. On this basis, it has been argued that Scripture need not be understood as a repository of divine intention, but as a medium through which the Word takes place in the act of reading. Its interpretation, therefore, should not aim at reconstructing the Word as an authorial intention behind the text, but at articulating textual meaning in such a way that space is opened for the Word to occur as address and response. LLMs thus serve in this study as a conceptual lens through which these hermeneutical assumptions become newly visible.

This study has shown that the destabilisation of logocentric models of meaning does not constitute a theological problem, but rather clarifies the distinction between the articulation of textual meaning and the enactment of the Word itself. While AI-assisted interpretation can legitimately contribute to rendering the semantic sense of a text explicit, it remains confined to the level of meaning and cannot participate in the relational and responsive dimension presupposed by address. This distinction has practical relevance for contemporary theological reflection, religious education, and pastoral engagement with digital technologies, as it supports a responsible use of AI as a preparatory interpretive aid without reducing Scripture to information processing.

---

34 On the classical distinction between the literal and spiritual senses of Scripture, see *Catechism of the Catholic Church*, §§115–119, which affirms the primacy of the literal sense while recognising further spiritual senses as emerging from the unity of Scripture, Christ, and the life of the Church. For a modern magisterial discussion of *sensus plenior* and the role of reception in the emergence of biblical meaning, see Pontifical Biblical Commission, *The Interpretation of the Bible in the Church* (Vatican City: Libreria Editrice Vaticana, 1993), II.B ('The Meaning of Inspired Scripture').

**Contact**

***Dr. Jiří Dosoudil***

Charles University

Protestant Theological Faculty

Černá 9, 115 55 Praha 1, Czech Republic

[jiri@dosoudil.cz](mailto:jiri@dosoudil.cz)

# The Anthropological Turn Towards Dialogue in the Age of Generative AI

Milan Urbančok, Jozef Žuffa, Lucia Malíčková

DOI: 10.32725/cetv.2026.006

## Abstract

Generative artificial intelligence is reshaping the conditions of theological interpretation by changing how religious texts are searched, organised, questioned, and methodologically approached. This article examines the methodological and anthropological implications of integrating generative AI into theological research, with particular attention to the formulation of research questions, the interpretation of textual corpora, and the responsibility of the human interpreter. The study is based on a theological-anthropological, hermeneutical, and conceptual analysis that draws on the authors' research trajectory since 2023, including interdisciplinary collaboration with the National Supercomputing Centre, a case study of a religious movement, and scholarly work on AI-assisted analysis of religious texts. It argues that generative AI may function as a dialogical mirror: it can support retrieval, orientation, clustering, and the testing of formulations, while also reflecting the assumptions, prompts, and interpretive horizons of the researcher; however, it cannot replace human interpretation, contextualisation, ethical assessment, or theological discernment. The article therefore proposes an anthropological turn towards dialogue and responsibility, offering a framework for responsible work with generative AI grounded in dialogical hermeneutics and human-in-the-loop theological discernment.

**Keywords:** generative artificial intelligence, theological methodology, anthropological turn, dialogical hermeneutics, dialogical mirroring, human-in-the-loop, interpretation of religious texts

## Introduction

### Generative AI as a Sign of the Times

Generative artificial intelligence does not function merely as an accelerator of work with information. It transforms the environment in which language is formed and meanings are articulated. Theological thinking thereby enters conditions that cannot be described as neutral: the horizon of pre-understanding within which questions are posed is itself changing.

At this level, AI acquires the status of a 'sign of the times': a phenomenon that in turn reshapes the

criteria of knowledge, argument, authority, and trust.<sup>1</sup> Here theology does not confront a technical problem but a hermeneutical shift: what appears to be a tool enters the very mechanisms by which meaning is produced and received.

This article therefore asks how the systematic use of generative AI reshapes methodological decisions in theological research and why this process calls for an anthropological turn towards dialogue. Its aim is to identify the conditions under which generative AI may support theological interpretation without displacing human responsibility, discernment, and dialogical encounter. The article argues that generative AI should not be understood as an autonomous interpreter, but as a dialogical mirror that exposes the structure of the researcher's question and makes the need for human-in-the-loop theological discernment more visible. In this respect, the article positions itself against both the reduction of AI to a productivity tool and approaches limited to external normative assessment without methodological explicitness.

Paolo Benanti, a member of the Third Order of Saint Francis, an expert in AI ethics, and an adviser to the Vatican and international institutions, describes the digital condition of contemporary life as an epochal shift in which technologies cease to be a peripheral apparatus and become the coordinating grid of existence.<sup>2</sup> The fundamental anthropological question therefore does not move towards whether machines 'think' but towards what happens to the human being who delegates an increasing share of cognitive and decision-making operations to technical systems. Theology has no reason to remain neutral here: its object is the human person as a free, relational, and responsible being.

The mechanism by which generative artificial intelligence enters the interpretive process can be illustrated by a short biblical text that works with symbolic oppositions and metaphorical language: 'Enter through the narrow gate, for wide is the gate and broad is the road that leads to destruction, and many enter through it. How narrow is the gate and how constricted the road that leads to life, and few find it.' (Matt 7:13–14)

The text was analysed with generative AI based on two differently formulated prompts. In the first case, the model was asked to summarise the text's central message; in the second, to analyse its potentially polarising effect. The resulting outputs did not differ in the text's content but in the selection of emphases: an existentially oriented prompt foregrounded personal decision, responsibility, and the arduousness of the path to life,<sup>3</sup> whereas an analytically oriented prompt—focused on social consequences—highlighted the dichotomous distinction between 'majority' and 'minority' and its possible polarising potential.<sup>4</sup>

The difference does not arise from the biblical text but from the interpretive frame embedded in the question. Generative AI performs neither normative nor theological evaluation; it selectively amplifies lines of meaning according to the orientation of the prompt. The language model works with symbolic and metaphorical language but does not decide on the legitimacy, truth, or ethical consequences of an interpretation. Interpretation, contextualisation, and the evaluation of consequences remain non-delegable.<sup>5</sup>

1 See Jozef Žuffa and Ján Štvrtina, 'Umelá inteligencia ako znamenie čias', *Teologický časopis* 22, no. 2 (2024): 57–66. Ján Štvrtina specialises in symbolism and culturally shaped modes of thinking across diverse contexts.

2 Paolo Benanti, *Digital Age: Teoria del cambio d'epoca. Persona, famiglia e società* (Edizioni San Paolo, 2020), 49–50; see also 95–96.

3 Output 1: The text uses the image of two paths to articulate a call to personal decision and responsibility. It emphasises that the path leading to life requires deliberate effort and is not the default choice of the majority.

4 Output 2: The text implicitly distinguishes between those who walk the narrow path leading to life and the majority heading towards destruction. Such framing can encourage an exclusive understanding of salvation and reinforce an 'us–them' dichotomy.

5 For further discussion, see Mark Coeckelbergh, a contemporary Belgian philosopher of technology whose work focuses on the philosophical and ethical questions of robotics and artificial intelligence; he is Professor of Media and Technology at the University of

The social dimension of the digital environment intensifies this situation. Benanti describes how the promise of universal communication can turn into fragmentation, conflict, and manipulation when communication is governed by the logic of attention capture, the multiplication of emotions, and the monetisation of data.<sup>6</sup> In the atmosphere of new technological discoveries, theological communication is invited to enter this logic: we are aware that without an expanded anthropological grasp, complex themes are reduced to signals of loyalty, dialogue is shortened to reaction, and discernment is weakened in favour of affective performance.

In this context, Pope Francis emphasises ‘the wisdom of the heart’ as a counterweight to technical and informational excess: this is not sentimentalism but the cultivation of discernment that protects communication from being reduced to effect.<sup>7</sup> Ethical philosophy of AI likewise notes that what is decisive is not only individual system errors but a shift in the anthropological image that silently stabilises in technological practice. Coeckelbergh points to the risk of ‘thoughtlessness’: when AI is accepted as self-evident, we stop asking what values and assumptions are inscribed in technologies, and the capacity to bear tension and preserve the dignity of the other—even in conflict—is weakened.<sup>8</sup>

The following sections develop this claim by moving from the problem of prompting and interpretive framing to a methodological account of dialogical mirroring and human-in-the-loop theological discernment.

## Methodology: Dialogical Mirroring and Human-in-the-Loop Interpretation

### Type of Study

This study is not designed as a quantitative or experimental assessment of generative AI. It is a theological-anthropological, hermeneutical, and conceptual analysis of how generative AI reshapes the conditions of theological interpretation. Its aim is not to measure the performance of a model, but to clarify the methodological and anthropological conditions under which AI-assisted work with religious texts can remain accountable to human responsibility, contextual interpretation, and theological discernment.

This study is grounded in hermeneutics understood not merely as a theory of textual interpretation, but as a theory of understanding. Petr Pokorný defines hermeneutics as a theory of interpretation that, in its contemporary form, becomes a general theory of understanding.<sup>9</sup> This perspective is decisive for theological work with generative AI. AI-assisted analysis does not simply process textual material; it intervenes in the way questions are formulated, meanings are selected, and interpretive horizons are made visible. For this reason, the model’s role must remain heuristic and auditable, while interpretation, contextualisation, and normative discernment remain the responsibility of the human interpreter.

---

Vienna and works at the intersection of technological and environmental ethics. Mark Coeckelbergh, *Etika umělé inteligence* (Filosofia, 2023), 96–98, 112–14.

6 Paolo Benanti, *Il crollo di Babele: Che fare dopo la fine del sogno di Internet?* (Edizioni San Paolo, 2024), 37–39, 93–99, 129.

7 Pope Francis, ‘Message of His Holiness Pope Francis for the 58th World Day of Social Communications: Artificial Intelligence and the Wisdom of the Heart: Towards a Fully Human Communication’, 24 January 2024, sec. ‘Starting with the Heart’, <https://www.vatican.va/content/francesco/en/messages/communications/documents/20240124-messaggio-comunicazioni-sociali.html>: ‘At this time in history, which risks becoming rich in technology and poor in humanity, our reflections must begin with the human heart ... Only by adopting a spiritual way of viewing reality, only by recovering a wisdom of the heart, can we confront and interpret the newness of our time and rediscover the path to a fully human communication.’

8 Coeckelbergh, *Etika umělé inteligence*, 210–11.

9 Petr Pokorný et al., *Hermeneutika jako teorie porozumění: Od základních otázek jazyka k výkladu bible* (Vyšehrad, 2005), 17.

## Hermeneutical Framework

Building on this general understanding of hermeneutics, this study approaches interpretation as a dialogical movement rather than as the extraction of information from a text. Schökel and Bravo Aragón describe the relation between author, work, and receiver as a dynamic process in which the text does not merely inform the reader but addresses, challenges, and invites him or her into renewed understanding. This dialogical understanding of interpretation corresponds to Gadamer's concept of the fusion of horizons, in which understanding arises not from methodological control alone but from the interplay between the interpreter's historical situatedness and the text's claim to truth.<sup>10</sup> In this sense, interpretation involves an alternation between the reader's questions and the text's capacity to reshape those questions. This is directly relevant to AI-assisted theological research: the model may help organise textual material, but the dialogical movement of understanding remains bound to the human interpreter who asks, receives, tests, and responds.

The metaphor of mirroring is therefore used here in a limited and hermeneutical sense. The metaphor of mirroring should not be understood in a representationalist sense. It does not imply that AI reflects reality or meaning as such, but rather that it reflects the structure of the researcher's questioning and interpretive horizon. Ska's discussion of mirrors, lamps, and windows in biblical interpretation shows that the image of the mirror has long served to describe textual mediation. A text may function as a mirror insofar as it reflects a literary or theological world before the reader and invites the reader to enter it. Yet the metaphor also requires caution: what is reflected must be read and discerned, since reflected images may be partial or distorted.<sup>11</sup> In this article, generative AI is understood as a dialogical mirror in this restricted sense. It does not disclose the meaning of the text by itself; rather, it reflects the assumptions, prompts, and interpretive horizon through which the researcher approaches the text.

## Research Material

The research material for this study consists of the authors' research trajectory since 2023. This trajectory includes interdisciplinary collaboration with the National Supercomputing Centre, AI-assisted work with religious text corpora, a case study of the Nazaret religious movement, and subsequent theological reflection on the methodological role of generative AI. These materials are not treated as isolated empirical data, but as a research trajectory through which the methodological question of AI-assisted theological interpretation becomes visible.

The study's methodological framework emerged through a sequence of concrete research decisions. The key choices were derived from the practical need to preserve criteria of scholarly control, auditability, and hermeneutical responsibility.

In 2023, the authors of this study, Milan Urbančok and Jozef Žuffa, established a research collaboration with the National Supercomputing Centre in the area of analysing religious texts using large language models. Urbančok's work focuses on moral theology, human freedom, and discernment in religious experience, while Žuffa develops and interlinks methodological approaches

10 Luis Alonso Schökel and José María Bravo Aragón, *Appunti di ermeneutica: Comprendere e interpretare i testi biblici e letterari*, trans. Gabriella Zucchi (Centro editoriale dehoniano, 2014), 'Struttura dialogica della comprensione', EPUB. On Gadamer's fusion of horizons and the intersection of horizons, see Petr Pokorný et al., *Hermeneutika jako teorie porozumění: Od základních otázek jazyka k výkladu bible* (Vyšehrad, 2005), 196, 198.

11 Jean-Louis Ska, *Specchi, lampade e finestre: Introduzione all'ermeneutica biblica* (Centro editoriale dehoniano, 2014), 'Lo specchio', EPUB.

in pastoral theology. The professional coordination of the collaboration is currently provided by Lucia Malíčková, who connects the academic, technological, and research sectors in the use of artificial intelligence.<sup>12</sup> The aim was not to substitute theological interpretation, but to test the extent to which digital tools can support orientation in extensive corpora of digitised texts from a religious movement and identify patterns of meaning that remain less visible in traditional reading. The outcome was a research report and an article published in *HPC Focus*.<sup>13</sup>

### Role of Generative AI

On this basis, the use of generative AI in this study is not understood as the automation of theological judgement. It is understood as a controlled heuristic procedure within a broader hermeneutical process. The model supports retrieval, orientation, clustering, and the testing of formulations; it does not replace interpretation, contextualisation, or theological discernment. While generative AI performs operations that resemble interpretive selection and recombination, it lacks the capacity for accountable, situated, and normatively grounded interpretation.

A decisive step was to restrict the model's function to retrieving relevant passages (information retrieval), not generating new texts.<sup>14</sup> This restriction is not only technical; it is methodological. The model selects; interpretation remains the researcher's task. It safeguards context, preserves the possibility of checking back against the source, and makes interpretive decisions traceable. Meaning does not arise in a synthetic paraphrase detached from the text, but in work with a concrete source and its connections.

The next phase, represented by a case study of the Nazaret movement (the same religious community as in the first study), shifted methodological reflection into an explicit anthropological register.<sup>15</sup> Technical assistance ceased to be a topic and became a means: it revealed the limits of a purely analytic approach. Language models can identify thematic clusters and repetitions, but the meaning of these patterns can be interpreted only in contact with concrete experience. Methodologically, this entails a shift from technical sorting to dialogical discernment: research does not become 'faster' in production, but more precise in questioning and more responsible in dealing with meaning. By discerning dialogue, we mean a mode of dialogical inquiry in which the aim is not primarily to defend positions or to reach rapid agreement, but to clarify the meanings, values, and experiential assumptions that shape interpretation. In this sense, dialogue is understood as a process of critical and reflective discernment: it attends to tensions, implicit frameworks, and the possible consequences of interpretation, while preserving the responsibility of the human interpreter for normative judgment. Within this study, discerning dialogue functions as a methodological orientation for working with texts, lived experience, and AI-assisted interpretive support. In preparing this study, the language model ChatGPT Pro 5.2 was used as a support tool in academic writing, especially for analysing lines of thought, refining formulations, and editing the text. Its use was limited to working with existing material; interpretive decisions, methodological conclusions, and normative evaluations remain exclusively within the authors' competence.

12 Halyna Hyryavets, 'Dáta, teológia a HPC: Spolupráca, ktorá hľadá cesty k porozumeniu', EUROCC@NSCC, 8 July 2025, <https://eurocc.nsc.sk/data-teologia-a-hpc-spolupraca-ktora-hlada-cesty-k-porozumeniu/>.

13 Bibiána Lajčinová, Jozef Žuffa, and Milan Urbančok, 'Využitie veľkých jazykových modelov na efektívnu analýzu náboženských textov', *HPC Focus* 8, no. 1 (2024): 76–89, <https://journals.savba.sk/index.php/hpcfocuse/article/view/4246>.

14 Lajčinová, Žuffa, and Urbančok, 'Využitie veľkých jazykových modelov', 76–89.

15 Milan Urbančok and Jozef Žuffa, 'Od opravidnosti k polarizácii. Krehkosť duchovného vedenia v hnutí Nazaret', *Studia Aloisiana* 16, no. 1 (2025): 59–72.

## Criteria of Control

The methodological use of AI was therefore governed by several criteria: the human-in-the-loop principle, the traceability of interpretive claims, the distinction between retrieval, clustering, and interpretation, and the non-delegable responsibility of the human interpreter. The model may select, compare, or reorganise textual material, but the evaluation of meaning, theological relevance, ethical consequences, and pastoral implications remains a human task.

## Analytical Material: The Nazaret Case Study

The Nazaret case study functions in this article as analytical material for reflecting on the methodological role of generative AI in theological interpretation. It is not presented here as a self-standing empirical study, but as an illustrative case in which the relation between textual analysis, interpretive framing, and human responsibility becomes visible.

The case study of the Nazaret movement has methodological value as a model of dynamics that may emerge in various religious and formation contexts. Interpretative Phenomenological Analysis (IPA) made it possible to reconstruct the meanings that actors attributed to spiritual guidance, obedience, and their own decision-making.

In this study, IPA is understood as a qualitative methodology focused on how participants make sense of significant lived experience. Its idiographic orientation requires close engagement with individual testimonies before moving toward more general thematic patterns. At the same time, IPA is interpretative in a double sense: participants interpret their own experience, while the researcher interprets these meaning-making processes within a broader anthropological and theological horizon.

The analysis exposed tensions between faith as a gift and its transformation into a demand, between free discernment and the delegation of responsibility to authority. Respondents' testimonies revealed a risk of polarisation arising where discernment is replaced by obedience and conscience comes into conflict with authority.<sup>16</sup>

Phenomenological approaches in theological research often remain methodologically constrained by the practical demands of working with extensive textual material. IPA requires close reading of testimonies, attention to nuance, and respect for the subjective perspective. With larger corpora, this requirement becomes an organisational problem, often leading either to a reduction of the material or to a shift of attention from meaning to logistics.

At this stage, the pragmatic value of collaboration with language models was confirmed. The model does not perform phenomenological interpretation; it can, however, support preliminary orientation in the text, locate thematically relevant passages, and make recurring linguistic patterns more transparent.<sup>17</sup> Phenomenological interpretation can then concentrate on discerning meaning rather than on mechanical data sorting. Within this division of methodological labour, AI-assisted retrieval serves a preparatory and heuristic function, whereas phenomenological interpretation proper remains tied to close reading, contextual sensitivity, and the researcher's accountable judgment.

In the Nazaret text-analysis study, the model helped to identify stable linguistic constructions associated with obedience, authority, and spiritual guidance, while IPA made it possible to show

<sup>16</sup> Urbančok and Žuffa, 'Od opravičnosti k polarizácii', 59–72.

<sup>17</sup> Urbančok and Žuffa, 'Od opravičnosti k polarizácii', 59–72.

how these constructions enter concrete life stories. The result was not a typology based on textual aggregation, but a reconstruction of dynamics that shaped the experience of faith, discernment, and personal responsibility.

The cooperation between technical assistance and phenomenological interpretation thus expands methodological possibilities without changing theology's epistemological core. It is not a transfer of authority from interpreter to tool, but an extension of the reach of work with the material while preserving hermeneutical responsibility. At the same time, it sharpens the distinction between the linguistically processable layer of experience and what remains the inexpressible core of lived experience: the model can amplify and systematise linguistic layers, but it cannot replace the act of understanding that arises in the dialogue between the interpreter and a concrete story.

The case therefore provides a concrete basis for formulating the conceptual findings of this article: prompting functions as interpretive framing, AI can support but not replace theological judgement, and responsible interpretation requires a circle of experience, knowledge, dialogue, and discernment.

## Results: From Interpretive Framing to the Circle of Responsibility

The analysis yields three conceptual findings. First, prompting functions as interpretive framing: the question posed to a model does not merely request information but structures the field of possible meanings. Second, generative AI can support theological research by retrieving, comparing, and organising textual material, but it cannot assume theological judgement. Third, responsible AI-assisted interpretation requires a circle of responsibility in which experience, knowledge, dialogue, renewed understanding, and discernment remain connected.

### 1. Prompting as Interpretive Framing

The example of the two prompts confirms a basic hermeneutical insight: the question posed to a text is never neutral. Pokorný describes the reader's question as an expression of pre-understanding.<sup>18</sup> In AI-assisted interpretation, the prompt functions in an analogous way. It does not merely request information; it establishes an interpretive frame, foregrounds certain possible meanings, and leaves others in the background. The methodological task is therefore not only to evaluate the model's answer, but also to examine the question that generated it.

The first finding is therefore that AI does not simply answer theological questions; it reflects the interpretive frame through which those questions are asked.

Systematic use of language models in theological research has revealed a methodological problem of polarisation as a structural, not merely a content-related, category. Polarisation in religious settings rarely grows out of explicit doctrinal differences; more often, it is rooted in differing value frameworks, experiences, and implicit assumptions that remain unarticulated.<sup>19</sup>

### 2. AI as Support, Not as Theological Judgement

In this context, language models can serve a supportive function by mapping the argumentative and evaluative logics present in a text or discourse. The point is not to delegate the decision as to which position is 'true'; it is to clarify the starting points: which values positions seek to protect,

<sup>18</sup> Pokorný et al., *Hermeneutika jako teorie porozumění*, 195.

<sup>19</sup> Urbančok and Žuffa, 'Od opravdivosti k polarizácii', 59–72.

which concerns they carry, and which wounds they may be articulating. Such clarification creates a precondition for mediation that is not based on relativising truth but on understanding the experience from which truth-claims arise.<sup>20</sup>

Chouraqui's account of rabbinic exegesis shows that close attention to linguistic detail has long belonged to theological interpretation. Rabbinic reading attends to words, repetitions, stylistic figures, and textual patterns, yet this attention is ordered toward meaning rather than mere formal analysis.<sup>21</sup> This distinction is important for AI-assisted theological work. Generative AI can help identify textual regularities and possible semantic emphases, but it cannot determine their theological significance. Pattern recognition becomes hermeneutically meaningful only when it is integrated into responsible human interpretation.

The second finding is that AI-assisted pattern recognition becomes theologically meaningful only when integrated into human interpretation, contextualisation, and discernment.

Methodologically, this entails a shift from a polemical model to a model of discerning dialogue. In this article, discerning dialogue denotes a structured interpretive process that seeks to uncover the experiential, evaluative, and anthropological assumptions underlying competing positions. Its purpose is neither mere conflict reduction nor the suspension of truth-claims, but a more adequate understanding of how particular convictions emerge, what values they seek to protect, and what forms of vulnerability or responsibility they express. In this way, dialogue becomes a mode of discernment rather than a mere exchange of opinions. Dialogue here is neither a technique for de-escalating conflict nor a compromise between claims; it is an anthropological process in which truth is sought in a shared space of experience and knowledge. The model can help to identify overlaps between value frameworks as well as points of fundamental divergence; in doing so, it reduces the risk of caricaturing the other and helps to guide the conversation with greater precision. The implications extend beyond academic methodology. In pastoral and synodal processes, mapping argumentative frameworks can support a shift from exchanging positions to understanding experience. The other ceases to be the bearer of a 'problematic opinion' and becomes a subject seeking to protect value and meaning. Discernment understood in this way reduces the pressure of polarising identities and increases the chance of rebuilding trust in environments where convictions overlap with personal history.

### 3. The Circle of Responsibility

The third finding is that responsible AI-assisted theological interpretation requires a circle of responsibility. This circle of responsibility is not identical with the hermeneutical circle; it may be seen only as structurally analogous to it, insofar as understanding moves between parts and whole, question and answer, pre-understanding and revised meaning. The difference is that the proposed circle explicitly foregrounds accountability for the use of AI-mediated outputs. Experience generates questions; knowledge organises and tests them; dialogue opens them to other perspectives; renewed understanding reshapes the interpreter's horizon; and responsibility governs the use of the resulting interpretation. Within this circle, AI can assist several operations, but it cannot replace the human act of discernment that holds the circle together.

The central image of this methodology is the circle of experience and knowledge. Experience generates knowledge, knowledge in turn shapes further experience. Dialogue expands the circle: one

20 Lajčinová, Žuffa, and Urbančok, 'Využitie veľkých jazykových modelov', 76–89; Urbančok and Žuffa, 'Od opravdivosti k polarizácii', 59–72.

21 André Chouraqui, *Il pensiero ebraico*, trans. Alberto Bigarelli (Queriniana, 1989), 33–34.

person's experience becomes a stimulus for another's knowledge, and shared understanding creates a new space of experience for the community. Generative AI can make implicit frameworks more transparent and amplify lines of meaning, but it does not close the circle. Discernment remains a human act and bears responsibility for the consequences of interpretation.

The metaphor of the circle of responsibility presupposes keeping the human being at the centre of interpretive and decision-making operations—that is, the principle of human in the loop.<sup>22</sup> Within this framework, generative AI is a component of a work cycle that includes formulating the question, delimiting the corpus, retrieving relevant passages, critical interpretation, and feedback verification; auditability of the procedure is a methodological prerequisite. Along these lines, the document *Antiqua et nova* distinguishes human intelligence as a personal expression and moral capacity from artificial intelligence, to which it ascribes the role of a tool without consciousness and responsibility.<sup>23</sup>

## Discussion: The Anthropological Turn Towards Dialogue

The anthropological turn in the age of generative artificial intelligence is not merely a thematic orientation; it functions as a methodological discipline. AI does not automatically accelerate production; rather, it can foster a qualitative development of questions, a closer contact with context in working with sources, and a finer and more precise distinction between data and meaning. In an environment of textual 'overload', this discipline becomes crucial.

The authors' experience confirms that working with language models functions as a test of the quality of one's own thinking: the model answers the structure of the question. A superficial question produces a simplified output; a precise question makes it possible to uncover hidden assumptions and open space for discernment. AI does not assume epistemic authority here; it highlights methodological weaknesses and forces correction.

Within this framework, dialogue is not an option but an anthropological necessity.<sup>24</sup> In dialogue, humanity is tested: responsibility, respect, truthfulness, and the ability to bear tension without forcibly closing it. Generative AI can support dialogue by clarifying frameworks and comparing perspectives without immediate evaluation. It does not, however, stand in for discernment; it merely raises the demand that discernment be made explicit.<sup>25</sup>

Buber's dialogical anthropology provides an important criterion for evaluating the use of generative AI in theology. His distinction between the I–Thou and I–It attitudes shows that not every linguistic exchange constitutes dialogue. Generative AI operates primarily within the sphere of mediation, objectification, and symbolic processing; it may therefore support interpretation, but it cannot become a personal Thou.<sup>26</sup> Friedman's interpretation of Buber is helpful here, since it

22 Paolo Benanti, *Human in the Loop: Decisioni umane e intelligenze artificiali* (Mondadori Università, 2022), 1, 3–4; cf. 15–16.

23 Dicastery for the Doctrine of the Faith and Dicastery for Culture and Education, 'Antiqua et nova: Note on the Relationship Between Artificial Intelligence and Human Intelligence', 28 January 2025, [https://www.vatican.va/roman\\_curia/congregations/cfaith/documents/rc\\_dcf\\_doc\\_20250128\\_antiqua-et-nova\\_en.html](https://www.vatican.va/roman_curia/congregations/cfaith/documents/rc_dcf_doc_20250128_antiqua-et-nova_en.html).

24 For a broader context, cf. Stanisław Chrobak SDB, Professor of Education at Cardinal Stefan Wyszyński University in Warsaw, whose research addresses general pedagogy, the theoretical foundations of education, and Christian-inspired pedagogy. Stanisław Chrobak, 'The University – A Space for Building Community and Trust', *Forum Pedagogiczne* 9, no. 2, part 1 (2019): 255–56, <https://doi.org/10.21697/fp.2019.2.18>.

25 'Generative AI can produce text, speech, images, and other advanced outputs that are usually associated with human beings. [...] Here, intelligence becomes a wisdom that "enables us to look at things with God's eyes, to see connections, situations, events and to uncover their real meaning." Our creativity enables us to generate new content or ideas, primarily by offering an original viewpoint on reality. Both capacities depend on the existence of a personal subjectivity for their full realization.' See Dicastery for the Doctrine of the Faith and Dicastery for Culture and Education, 'Antiqua et nova', paras. 59, 115, and n. 40.

26 Martin Buber, *I and Thou*, trans. Ronald Gregor Smith (T&T Clark, 1937), 3–4.

shows that the I–It world is not evil in itself, but becomes problematic when it dominates and excludes relation.<sup>27</sup> The danger of conversational AI is therefore not that it is a tool, but that its dialogical form may conceal a non-dialogical structure. AI can assist the work of theological interpretation only when its outputs are reinserted into human responsibility, personal encounter, and discernment.

For Buber, real life is grounded in meeting.<sup>28</sup> Friedman's account of Buber's 'sphere of between' and of making the other present further clarifies that genuine dialogue is not reducible either to subjective experience or to objective information exchange.<sup>29</sup> The presence of alternating utterances does not by itself create dialogue; a technologically mediated exchange may remain enclosed within the user's assumptions and become a sophisticated form of self-confirmation.<sup>30</sup> This is why the anthropological turn towards dialogue must distinguish between conversational form and dialogical reality.

Theological methodology therefore is not faced with the alternative of 'accepting' or 'rejecting' technology. It faces the requirement to integrate it in a way that strengthens human discernment and protects the dignity of the experience from which theological thinking grows.<sup>31</sup>

Ricoeur's hermeneutics of religious language clarifies why theological interpretation cannot be reduced to the processing of textual data. The biblical text does not merely transmit religious information; it opens a world before the reader, a world in which new possibilities of existence, faith, and response become intelligible. From this perspective, interpretation is not exhausted by commentary, analysis, or linguistic processing. It involves the reader's appropriation of the world disclosed by the text.<sup>32</sup> This is why the use of generative AI in theology requires an anthropological and dialogical framework: AI may assist in mapping linguistic patterns, but it cannot assume the existential and responsible act by which the human subject responds to the world disclosed by the text.

Jüngel sharpens this point by showing that the language of faith is fundamentally metaphorical and allocutory.<sup>33</sup> Speech about God does not function as a neutral description of an object within the world. It addresses the human person and opens reality beyond what can be grasped by ordinary descriptive language. This theological insight is decisive for AI-assisted interpretation: a model can identify metaphors, compare semantic fields, and suggest possible linguistic relations, but it cannot determine the truth of God-talk as an address that calls the human person to response, transformation, and responsibility.

## Conclusion: The Adventure of Knowledge

This article has asked how the systematic use of generative AI reshapes methodological decisions in theological research and why this calls for an anthropological turn towards dialogue. The answer proposed here is that generative AI changes not only the speed or scale of textual work, but also the conditions under which questions are formulated, meanings are selected, and interpretive horizons become visible.

27 Maurice S. Friedman, *Martin Buber: The Life of Dialogue* (University of Chicago Press, 1955), 57–66.

28 Buber, *I and Thou*, 11.

29 Friedman, *Martin Buber*, 82, 85–87.

30 Friedman, *Martin Buber*, 123–25.

31 Paolo Benanti and Sebastiano Maffettone, *Noi e la macchina: Un'etica per l'era digitale* (Luiss University Press, 2024), 65–67.

32 Paul Ricoeur, 'Ermeneutica filosofica ed ermeneutica religiosa', in Paul Ricoeur and Eberhard Jüngel, *Dire Dio: Per un'ermeneutica del linguaggio religioso*, ed. Giuseppe Grampa, 4th ed. (Queriniana, 2013), 65–72, PDF e-book.

33 Eberhard Jüngel, 'Verità metaforica: Riflessioni sulla rilevanza teologica della metafora come contributo all'ermeneutica di una teologia narrativa', trans. Giovanni Moretto, in Paul Ricoeur and Eberhard Jüngel, *Dire Dio: Per un'ermeneutica del linguaggio religioso*, ed. Giuseppe Grampa, 4th ed. (Queriniana, 2013), 179–80, PDF e-book.

The main contribution of the article is the concept of generative AI as a dialogical mirror. AI can support retrieval, orientation, clustering, and the testing of formulations, but it also reflects the assumptions and pre-understandings of the researcher. For this reason, it cannot be treated as an autonomous interpreter.

The methodological implication is twofold. First, theological research must explicitly distinguish heuristic operations delegated to the language model—retrieving relevant passages, thematic clustering, mapping argumentative frameworks—from hermeneutical decision-making, which remains the interpreter's responsibility. Second, the auditability of the prompt, the corpus, and interpretive steps becomes a condition of scholarly control wherever generative systems enter the work.

The study works with text-oriented materials and qualitative interpretation. It does not provide a quantitative evaluation of model performance or a reception analysis of how AI changes theological communication in specific communities; these questions exceed the scope of the article. Nor does it address the technical aspects of training data and model architecture insofar as they do not translate directly into hermeneutical practice.

Further research can test the transferability of the proposed framework in other areas of theology and in related humanities disciplines that rely on interpretation. Comparative value lies in contrasting information-retrieval and text-generation regimes, since the degree of control, auditability, and the risk of epistemic drift differ between them. From a practical-theological perspective, the question also arises whether AI-assisted mapping of value frameworks can reliably support, for example, mediation and synodal discernment without reducing conflict to a technical problem.

Integrating AI can raise the scholarly level of theological work, the clarity of argument, and the methodological rigour of approaches—but only insofar as it remains bound to an anthropological premise: responsibility for meaning cannot be delegated to a system.

## **Contact**

### ***Dr. Milan Urbančok***

Trnava University  
Faculty of Theology  
Department of Systematic Theology  
Hornopotočná 23, 918 43 Trnava, Slovak Republic  
milan.urbancok@truni.sk

### ***Assoc. Prof. Dr. Jozef Žuffa***

Trnava University  
Faculty of Theology  
Department of Practical Theology  
Hornopotočná 23, 918 43 Trnava, Slovak Republic  
jozef.zuffa@truni.sk

### ***Dr. Lucia Malíčková***

Project Coordinator  
National Supercomputing Center Slovakia  
Dubravska cesta 9, 845 35 Bratislava 45, Slovak Republic  
lucia.malickova@slovakianscc.com

## Artificial Intelligence and Social Diversity: Demographic Aspects and Security Challenges

Ivana Olecká, Josef Smolík

DOI: 10.32725/cetv.2026.007

### Abstract

Recent advances in artificial intelligence (AI) technologies are increasingly shaping everyday life. This study examined patterns of AI use in the Czech Republic and their relationship with demographic factors. A representative sample of 521 respondents aged 15 and above was surveyed between March and June 2024 using online and assisted interviews. Key variables included gender, age (adolescence/early adulthood, middle adulthood, late adulthood, old age), and highest level of education (elementary, vocational, secondary, tertiary). Results show that intensive use of AI accounts is limited: only a small proportion of respondents use AI daily or very frequently, while roughly one-third use AI occasionally or rarely. Translation tools were the most widely adopted category ( $\approx 32\%$ ), followed by text generation tools ( $\approx 22\%$ ). Use of grammar checkers, image generators, and automotive AI remains marginal. Gender was not significantly associated with AI use. Age and education were significant predictors: younger and middle-aged adults reported higher engagement with text generation and translation tools, whereas older adults and seniors showed lower adoption and more concerns about AI. Similarly, higher education was associated with more frequent use, while vocationally trained respondents were less engaged and more apprehensive. These findings highlight that age and education are key determinants of AI adoption. Barriers such as uncertainty, limited knowledge, and fears of technology limit broader engagement. From a security perspective, uneven adoption and varying digital competencies pose challenges for safe and responsible AI use, underscoring the need for targeted educational interventions to reduce risks associated with misinformation, privacy breaches, and unequal access to AI benefits.

**Keywords:** artificial intelligence, AI adoption, digital literacy, demographic factors, age differences, education level, technology use, AI tools, social diversity, security challenges

## Introduction

In recent years, the rapid development of artificial intelligence (AI)<sup>1</sup> technologies<sup>2</sup> has profoundly impacted numerous domains of human activity.<sup>3</sup> However, it simultaneously presents significant risks.<sup>4</sup>

The rise of AI-generated content raises critical ethical and regulatory questions. Key concerns include the acceptability of creating content that may intentionally mislead or harm, the moral responsibility of developers and users, and the broader societal implications for democracy and trust in institutions.<sup>5</sup> Moreover, AI systems facilitate the creation of sophisticated plagiarised and auto-plagiarised content that is increasingly difficult to detect through conventional mechanisms.<sup>6</sup> What long remained a recognisable ethical breach within defined academic standards<sup>7</sup> now expands into a qualitatively new terrain, in which the very notions of authorship, originality, and attribution are destabilised by generative automation. As a result, misconduct that once relied on deliberate copying becomes embedded in ordinary knowledge practices, challenging existing frameworks of responsibility and raising urgent questions about how integrity can be sustained in environments where textual production itself is technologically co-authored.

The aim of this article is to map the extent of the use of artificial intelligence (AI)-based services and tools among Czech users, to analyse differences in the use of these technologies according to age, educational attainment, and gender, and to identify the main reasons for the rejection or non-use of AI services. Particular attention is paid to identifying which types of AI tools (e.g., text generation, translation, grammar checking, image generation, etc.) are most widespread and how their use varies across different sociodemographic groups.

- 1 This contribution is a result of the project Odolnost příslušníků Policie České republiky vůči dezinformačním vlivům a možnosti posilování jejich rezistence prostřednictvím vzdělávání (VK01020187), abbreviated as DEZINFOPOL, which was supported by the Ministry of the Interior of the Czech Republic under the programme Open Calls in Security Research 2023–2029, abbreviated as OPSEC. We note that definitions of AI vary across the literature. See: Vladimír Nulíček, 'Umělá Inteligence Na Základních a Středních Školách v ČR', *Lidský Kapitál a Investice Do Vzdělání: Umělá Inteligence a Strategické Změny v Oblasti Vzdělání*, 2024, 75–90, <https://doi.org/10.37355/LK-2023-05>; Martin Jurásek and Pavel Wawrosz, 'The use of chatbots in the Czech Republic with concentration on the Czech public administration', *International Journal of Public Administration, Management and Economic Development* 7, no. 2 (2022): 62–78; Kateřina Turková et al., 'Adapting to the Future: The Use of AI Tools and Applications in University Education and a Call for Transparent Rules and Guidelines', *International Journal for Educational Integrity* 21, no. 1 (2025): 29, <https://doi.org/10.1007/s40979-025-00203-9>. For the purposes of this study, we adopt the following working definition of artificial intelligence (AI) as a pragmatic framework for this study: intelligence displayed or simulated through code or machines. These systems may exist as software applications—such as chatbots, search engines, image analysis tools—or be embedded in hardware, including robots, vehicles, and Internet of Things devices. AI encompasses a range of techniques, including machine learning, neural networks, natural language processing, and computer vision, which are applied across fields as diverse as medicine, industry, and digital communication. One of AI's key capabilities is the analysis of large volumes of data to generate predictions or create content, a feature that also opens the door to potential misuse, particularly in the dissemination of false information and public manipulation.
- 2 Jurásek and Wawrosz, 'The use of chatbots in the Czech Republic with concentration on the Czech public administration'; Nulíček, 'Umělá Inteligence Na Základních a Středních Školách v ČR'; Turková et al., 'Adapting to the Future'; Andreas Kaplan, *Artificial Intelligence, Business and Civilization: Our Fate Made in Machines*, 1st ed., Routledge Focus on Business and Management (Routledge, 2022).
- 3 Mark Coeckelbergh, *Etika umělé inteligence*, 1st ed., trans. Sylva Ficová (Filosofia, 2023).
- 4 Dede Irman Pirdaus and Dhika Surya, 'Artificial Intelligence in Politics: Opportunities and Challenges for Digital Democracy', *International Journal of Humanities, Law, and Politics* 3, no. 2 (2025): 42–45, <https://doi.org/10.46336/ijhlp.v3i2.217>.
- 5 Coeckelbergh, *Etika umělé inteligence*.
- 6 As students employ AI to produce texts, institutions (including universities) rely on other algorithms to verify their authenticity. This creates a 'dual mediation of knowledge', in which responsibility is diffused across human and machine agency. Ethical questions consequently shift from individual integrity to collective responsibility for maintaining trust in knowledge. Tomáš Foltýnek and Philip M. Newton, 'What Does YouTube Advise Students About Bypassing AI-Text Detection Tools? A Pragmatic Analysis', *Journal of Academic Ethics* 24, no. 1 (2026): 8, <https://doi.org/10.1007/s10805-025-09675-3>.
- 7 Dominik Opatrný, 'K Etickým Aspektům Tzv. Autoplagiátů: Aneb Technologie Zpracování Vědeckého Recyklátu', *Caritas et Veritas* 5, no. 1 (2015): 42–50, <https://doi.org/10.32725/cetv.2015.006>.

## Technology as a Cultural and Anthropological Force

The new digital technologies generate foundational conditions for all human activity at every level. They are potentially disruptive unless new goals are aligned with emergent technological imperatives.<sup>8</sup> The internet exemplifies this shift by fundamentally transforming communication and enabling unprecedented access to human knowledge and information that was previously difficult and slow to obtain.<sup>9</sup> While earlier technologies generally operated within relatively stable social, ethical, and cultural frameworks, artificial intelligence represents a qualitative break due to its scale, autonomy, and capacity to generate and manipulate information. AI should therefore not be understood merely as a neutral instrument but as a technological actor that actively mediates social practices as well as moral and epistemic values. Through real-time interaction, autonomous decision-making, and generative capacities, AI intervenes in public opinion formation, social norms, and institutional processes, thereby amplifying its societal and ethical implications. Its abilities in autonomous learning, content generation, and large-scale predictive analysis allow AI to adapt to new data and operate across domains, intensifying both its impact and ethical complexity beyond that of previous technologies. In line with McLuhan's insight that 'the medium is the message',<sup>10</sup> AI functions as a cultural environment within which perception, cognition, and experience are restructured. This development resonates with Ellul's warning that technology tends toward autonomy, transforming humans into 'functions of their tools'<sup>11</sup> and challenging humanist conceptions of freedom, reason, and moral agency.

Recent research<sup>12</sup> conceptualises AI as part of a new technological ecology in which humans, machines, and institutions interact dynamically and often unpredictably. Within this ecology, AI emerges as an actor that contributes to meaning-making and moral interpretation, co-shaping understandings of truth, responsibility, and the good.<sup>13</sup> Generative AI systems such as ChatGPT thus operate as societal actors that not only represent but also actively produce values and meanings, increasingly perceived as cultural actors influencing norms, political positions, and conceptions

8 Marshall McLuhan and Ivo Pondělíček, *Člověk, média a elektronická kultura: výbor z díla*, 1st ed. (Jota, 2000).

9 Petr Nutil, *Média, lži a příliš rychlý mozek: průvodce postpravdivým světem*, 1st ed. (Grada, 2018).

10 McLuhan and Pondělíček, *Člověk, média a elektronická kultura*.

11 Jacques Ellul, *La Technique: Ou, L'enjeu Du Siècle*, 2e éd. rev., Classiques Des Sciences Sociales (Economica, 1990).

12 Victor Galaz et al., 'Artificial Intelligence, Systemic Risks, and Sustainability', *Technology in Society* 67 (November 2021): 101741, <https://doi.org/10.1016/j.techsoc.2021.101741>; Fabio Y. S. Motoki et al., 'Assessing Political Bias and Value Misalignment in Generative Artificial Intelligence', *Journal of Economic Behavior & Organization* 234 (June 2025): 106904, <https://doi.org/10.1016/j.jebo.2025.106904>; Jurásek and Wawrosz, 'The use of chatbots in the Czech Republic with concentration on the Czech public administration'; Nulíček, 'Umělá Inteligence Na Základních a Středních Školách v ČR'; Turková et al., 'Adapting to the Future'; Vaclav Moravec et al., 'Everyday Artificial Intelligence Unveiled: Societal Awareness of Technological Transformation', *Oeconomia Copernicana* 15, no. 2 (2024): 367–406, <https://doi.org/10.24136/oc.2961>; Martin Lnenicka and Renata Machova, 'A Mixed-Methods Analysis of Artificial Intelligence Adoption and Perceived Impacts in Czech Municipal Administration', *Transforming Government: People, Process and Policy*, ahead of print, 8 October 2025, <https://doi.org/10.1108/TG-06-2025-0175>; Daniel Šárovec, 'Political Actors in the Age of Generative Artificial Intelligence: The Czech Perspective', *Acta Informatica Pragensia* 14, no. 2 (2025): 282–95, <https://doi.org/10.18267/j.aip.272>; Mike Zajko, 'Artificial Intelligence, Algorithms, and Social Inequality: Sociological Contributions to Contemporary Debates', *Sociology Compass* 16, no. 3 (2022): e12962, <https://doi.org/10.1111/soc4.12962>; Lucie Zormanova and Hana Vavříková, 'Attitudes of Czech and Polish Teachers Towards the Use of Artificial Intelligence in Schools', *International Journal of Research in E-Learning*, 4 July 2025, 1–23, <https://doi.org/10.31261/IJREL.2025.11.1.02>; Michal Konečný et al., 'The Use of Artificial Intelligence in Marketing: A Case Study from the Czech Republic', *Strategic Management*, no. 00 (2025): 97–97, <https://doi.org/10.5937/StraMan2500010K>; Tomáš Javorčík and Josef Malach, 'Conditions and Bases of Incorporation of Artificial Intelligence into Czech School Environment', *Proceedings of the European Conference on the Impact of Artificial Intelligence and Robotics (ECLAIR 2019)* (Normandie / France), 2019, [https://www.researchgate.net/publication/338209631\\_Conditions\\_and\\_Bases\\_of\\_Incorporation\\_of\\_Artificial\\_Intelligence\\_into\\_Czech\\_School\\_Environment](https://www.researchgate.net/publication/338209631_Conditions_and_Bases_of_Incorporation_of_Artificial_Intelligence_into_Czech_School_Environment).

13 Jason Gabriel, 'Artificial Intelligence, Values, and Alignment', *Minds and Machines* 30, no. 3 (2020): 411–37, <https://doi.org/10.1007/s11023-020-09539-2>.

of autonomy and truth.<sup>14</sup> Liu et al.<sup>15</sup> regard AI as a pivotal moment in cultural evolution, whereby technology begins to co-shape human ethical and social environments.

As an actor embedded in decision-making processes, AI acquires an anthropological dimension, transforming humans into components of a broader socio-technical decision-making ecosystem.<sup>16</sup> AI represents a civilisational phenomenon, provoking fundamental questions regarding humanity's relationship with its own creations.<sup>17</sup> By mediating relationships between citizens and the state, AI reshapes notions of dignity, rights, responsibility, and trust. From the perspective of the philosophy of technology, this shift signals a redistribution of agency within institutional contexts. Andrews warns that the mechanisation of decision-making risks dehumanising public administration and undermining the cultural legitimacy of institutions, as authority and responsibility become increasingly displaced onto technological actors.<sup>18</sup>

The absence of a unified framework for understanding AI risks fragmented knowledge and undermines society's collective capacity to navigate the digital world. Philosophically, this raises the question of the 'ontological status of humans in relation to autonomous systems and the knowability of digital reality'.<sup>19</sup> AI is increasingly integrated into the fundamental structure of society—the ensemble of institutions that allocate benefits, rights, and responsibilities—thus functioning as a cultural and anthropological force shaping human autonomy and societal relationships.<sup>20</sup>

In education, AI emerges as a cultural phenomenon challenging traditional anthropological categories of work, learning, and intellectual integrity. Digitalisation transforms the relationships between student, knowledge, and institution, relocating education from formal structures to online environments where technology mediates ethical conduct.<sup>21</sup> Educational practices must cultivate an understanding of how algorithms reflect values and power, as AI 'cannot easily be asked to explain its decision-making process'.<sup>22</sup>

### *Artificial Intelligence and the Transformation of Knowledge and Responsibility*

Language and speech function as primary media through which meaning is articulated, accumulated, and transmitted, enabling the preservation and dissemination of human experience and knowledge.<sup>23</sup>

The emergence of AI as a technological actor fundamentally transforms these processes by reshaping modes of knowing, communication, and decision-making. Algorithmic systems increasingly influence what people read, how they communicate, and how reality is interpreted. As Luciano

---

14 Motoki et al., 'Assessing Political Bias and Value Misalignment in Generative Artificial Intelligence'; Nicholas Kluge Corrêa et al., *Worldwide AI Ethics: A Review of 200 Guidelines and Recommendations for AI Governance*, version 7, 10, no. 4 (2022), <https://doi.org/10.48550/ARXIV.2206.11922>.

15 Albert Chun-Chen Liu et al., *Understanding Artificial Intelligence: Fundamentals and Applications* (Wiley-IEEE Press, 2022).

16 Michael Veale, 'Logics and Practices of Transparency and Opacity in Real-World Applications of Public Sector Machine Learning', *arXiv Preprint arXiv:1706.09249*, 2017, <https://arxiv.org/pdf/1706.09249>.

17 Jiaming Ji et al., 'AI Alignment: A Comprehensive Survey', *arXiv Preprint arXiv:2310.19852*, 2023, <https://alignmentsurvey.com/uploads/AI-Alignment-A-Comprehensive-Survey.pdf>.

18 Pia Andrews et al., 'A Trust Framework for Government Use of Artificial Intelligence and Automated Decision Making', version 1, preprint, *arXiv*, 2022, <https://doi.org/10.48550/ARXIV.2208.10087>.

19 Peter Slattery et al., 'The AI Risk Repository: A Comprehensive Meta-Review, Database, and Taxonomy of Risks From Artificial Intelligence', version 2, preprint, *arXiv*, 2024, 15, <https://doi.org/10.48550/ARXIV.2408.12622>.

20 Thomas Ferretti, 'Value Alignment Without Institutional Change Cannot Prevent the Societal Risks of Artificial Intelligence', *LSE Public Policy Review* 3, no. 3 (2024): 2, <https://doi.org/10.31389/lseppr.113>.

21 Foltýnek and Newton, 'What Does YouTube Advise Students About Bypassing AI-Text Detection Tools?'

22 Jón Danielsson et al., 'Artificial Intelligence and Systemic Risk', *Journal of Banking & Finance* 140 (July 2022): 5, <https://doi.org/10.1016/j.jbankfin.2021.106290>.

23 McLuhan and Pondělíček, *Člověk, média a elektronická kultura*.

Floridi<sup>24</sup> argues, this development gives rise to an ‘infosphere’ in which human and machine knowledge are deeply intertwined. The result is an epistemological paradox: while the volume of available data expands, the origins, structures, and meanings of knowledge become increasingly opaque, weakening personal responsibility and obscuring questions of agency and accountability. As an epistemic actor, AI does not merely reproduce information but actively constructs meaning, shaping public opinion and interpretive frameworks. Knowledge mediated by AI is therefore not neutral but conditioned by data structures, design choices, and social inequalities. Galaz et al.<sup>25</sup> highlight systemic risks of ‘algorithmic bias and allocative harms’, demonstrating how AI-mediated knowledge production implicates justice and responsibility in the digital age. This shift intensifies ethical concerns surrounding moral delegation: transferring judgement to technological actors’ risks diminishing human discernment, judgement, and conscience—capacities that cannot be fully algorithmised. The need for critical engagement with AI authority thus becomes central, understood as the ability to resist immediacy, dominant narratives, and automated outputs.<sup>26</sup>

AI also amplifies the collective character of knowledge production by automating synthesis, analysis, and dissemination at unprecedented scales and speeds. Unlike earlier technologies, AI as an actor generates new content, detects patterns across vast datasets, and interacts autonomously with users, rendering the epistemic chain both distributed and dynamic. As Veale notes, responsibility in such systems cannot be individualised but must be understood as collective and procedural, involving humans as co-authors rather than sole agents of knowledge and moral judgement.<sup>27</sup> Gabriel<sup>28</sup> further emphasises that technical and normative dimensions of AI are inseparable: how AI operates is inseparable from the values it implicitly promotes, shifting moral authority toward systems that ‘optimise’ values algorithmically.

This redistribution of epistemic and moral agency complicates responsibility across institutional contexts. Corrêa et al. highlight the plurality of value frameworks embedded in AI systems and the resulting diffusion of responsibility among developers, states, and institutions.<sup>29</sup> Ethical reflection thus becomes dialogical and culturally situated rather than reducible to universal principles. In public decision-making, digitalisation further blurs epistemic and legal boundaries of authority. Andrews warns that without traceability, explainability, and auditability, AI risks undermining institutional legitimacy.<sup>30</sup> Ferretti similarly argues that technical value alignment is insufficient without robust institutional frameworks capable of addressing structural inequalities exposed and amplified by AI actors.<sup>31</sup> AI often exposes and amplifies pre-existing institutional inequalities and failures, such as in copyright, labour markets, or privacy protection.<sup>32</sup>

The problem of alignment is fundamentally epistemological and ethical: do we know what machines should emulate, and who decides which values are correct?<sup>33</sup> This perspective illustrates that knowledge and responsibility in the AI era are collective and procedural. Responsibility for

24 Luciano Floridi, *Čtvrtá revoluce: jak infosféra mění tvář lidské reality*, 1st ed., trans. Čestmír Pelikán (Univerzita Karlova, Nakladatelství Karolinum, 2019).

25 Galaz et al., ‘Artificial Intelligence, Systemic Risks, and Sustainability’.

26 Motoki et al., ‘Assessing Political Bias and Value Misalignment in Generative Artificial Intelligence’; Nutil, *Média, lži a příliš rychlý mozek*.

27 Veale, ‘Logics and Practices of Transparency and Opacity in Real-World Applications of Public Sector Machine Learning’.

28 Jason Gabriel, ‘Artificial Intelligence, Values, and Alignment’, *Minds and Machines* 30, no. 3 (2020): 411–37, <https://doi.org/10.1007/s11023-020-09539-2>.

29 Corrêa et al., *Worldwide AI Ethics*; Liu et al., *Understanding Artificial Intelligence*.

30 Andrews et al., ‘A Trust Framework for Government Use of Artificial Intelligence and Automated Decision Making’.

31 Ferretti, ‘Value Alignment Without Institutional Change Cannot Prevent the Societal Risks of Artificial Intelligence’.

32 Martin Ford, *Roboti Nastupují: Automatizace, Umělá Inteligence a Hrozba Budoucnosti Bez Práce* (Rybka Publishers, 2017).

33 Ji et al., ‘Ai Alignment: A Comprehensive Survey’.

AI requires societal dialogue about values rather than purely technical standards. Responsibility for algorithmic decisions cannot be delegated to systems incapable of comprehending moral consequences. Transparency and explainability are therefore moral imperatives, not merely technical requirements.<sup>34</sup>

### *The Social and Educational Dimensions of Digital Inequality*

With every new technology, the frame itself changes, not merely the image within it.<sup>35</sup> This insight also applies to information mediated by AI. The impact of information and perceptions is shaped not only by content but also by the surrounding context in which they are presented.<sup>36</sup> AI enters this process as a new intermediary of human knowledge, altering language, form, and meaning. Empirical studies indicate that AI usage is unevenly distributed.<sup>37</sup> Age, education, and cultural capital remain key determinants, confirming that technology alone does not ensure equality and may reinforce disparities. For instance, the selection of ‘appropriate words’, a linguistic strategy employed by AI, can significantly influence text interpretation.<sup>38</sup> Postman<sup>39</sup> emphasises that each technological change produces a new ‘media ecology’, conferring power on some while diminishing it for others. From pedagogical and ethical perspectives, developing digital skills must extend beyond user competence to include critical and value-based formation, enabling an understanding of technology in relation to human dignity, freedom, and responsibility. This aligns with the mission of the humanities and theological disciplines to preserve and cultivate humanity within environments increasingly mediated by machine cognition. McLuhan<sup>40</sup> describes this as the ‘formation of the masses’, where individuals are interconnected through shared information and perceptions.

A lot of studies<sup>41</sup> highlight unequal access to AI benefits, particularly in agriculture and ecological systems, which vary according to age, education, and regional context. Digital literacy and cultural capital determine who can engage with AI. Without systemic measures, ‘deepened inequality’ and ‘lock-in’ effects may exacerbate structural disparities.<sup>42</sup> Motoki et al.<sup>43</sup> further stress that digital education must encompass ethical dimensions, cultivating the ability to recognise how algorithms reflect power relations, cultural biases, and social stereotypes. This development

34 Slattery et al., ‘The AI Risk Repository’; Danielsson et al., ‘Artificial Intelligence and Systemic Risk’.

35 McLuhan and Pondělíček, *Člověk, média a elektronická kultura*.

36 Jiří. Táborský, *V síti (dez)informací: proč věříme alternativním faktům*, 1st ed. (Grada Publishing, 2020).

37 Jurásek and Wawrosz, ‘The use of chatbots in the Czech Republic with concentration on the Czech public administration’; Petr Šigut and Tomáš Foltýnek, ‘Can We Detect ChatGPT-generated Texts in Czech and Slovak Languages?’, in *Proceedings of the Seventeenth Workshop on Recent Advances in Slavonic Natural Language Processing (RASLAN 2023)*, ed. Aleš Horák et al. (Tribun EU, 2023), <https://nlp.fi.muni.cz/raslan/raslan23.pdf>; Javorčík and Malach, ‘Conditions and Bases of Incorporation of Artificial Intelligence into Czech School Environment’.

38 Šigut and Foltýnek, ‘Can We Detect ChatGPT-generated Texts in Czech and Slovak Languages?’; Táborský, *V síti (dez)informací*.

39 Neil Postman, *Technopoly: The Surrender of Culture to Technology*, 1st ed. (Vintage Books, 1993).

40 McLuhan and Pondělíček, *Člověk, média a elektronická kultura*.

41 Galaz et al., ‘Artificial Intelligence, Systemic Risks, and Sustainability’; Xiaojun Yuan et al., ‘Adoption of Artificial Intelligence Technologies by Often Marginalized Populations’, in *Social Vulnerability to COVID-19*, ed. Xiaojun Yuan et al., Synthesis Lectures on Information Concepts, Retrieval, and Services (Springer International Publishing, 2023), [https://doi.org/10.1007/978-3-031-06897-3\\_3](https://doi.org/10.1007/978-3-031-06897-3_3); Partha Pratim Ray, ‘ChatGPT: A Comprehensive Review on Background, Applications, Key Challenges, Bias, Ethics, Limitations and Future Scope’, *Internet of Things and Cyber-Physical Systems* 3 (2023): 121–54, <https://doi.org/10.1016/j.iotcps.2023.04.003>; Marek Urban et al., ‘ChatGPT Improves Creative Problem-Solving Performance in University Students: An Experimental Study’, *Computers & Education* 215 (July 2024): 105031, <https://doi.org/10.1016/j.compedu.2024.105031>.

42 Geoff Mulgan, ‘The Social Economy and the Fourth Industrial Revolution: The Risks of Marginalization and How to Avoid Them’, in *Social Economy Science*, 1st ed., ed. Gorgi Krlev et al. (Oxford University Press/Oxford, 2023), <https://doi.org/10.1093/oso/9780192868343.003.0005>; Galaz et al., ‘Artificial Intelligence, Systemic Risks, and Sustainability’; Zajko, ‘Artificial Intelligence, Algorithms, and Social Inequality’.

43 Motoki et al., ‘Assessing Political Bias and Value Misalignment in Generative Artificial Intelligence’.

necessitates the establishment of conducive environments for the adoption and utilisation of AI across various sectors of the economy and society, as well as among diverse demographic groups. Understanding the intricacies of AI integration is crucial for navigating the future of digital transformation, as it holds the potential to redefining economic and societal structures profoundly.<sup>44</sup> In the contemporary landscape, AI-based technologies are at the forefront of socio-economic disruption, catalysing a burgeoning interest in AI education among social and political spheres.<sup>45</sup> These large-scale international empirical studies, based on extensive quantitative surveys among adolescents and young adults, consistently confirm high levels of engagement with generative AI tools, particularly in education, everyday communication, and creative activities.<sup>46</sup>

## Methodology

The study used a cross-sectional, ex post facto design<sup>47</sup> and was representative of the Czech population aged 15 and above in terms of age, education, and gender. Using proportional stratified random sampling, a final sample of 521 respondents was obtained.<sup>48</sup> The sample size was determined based on feasibility and the aim to achieve sufficient statistical power for detecting differences across age, gender, and educational subgroups. Data were collected between March and June 2024 via an online questionnaire, primarily through CAWI (Computer-Assisted Web Interviewing). A small proportion of respondents (<5%), mainly very elderly individuals who either did not have access to a computer or tablet or were unable to use one independently, completed the questionnaire via CAPI (Computer-Assisted Personal Interviewing) with assistance from a trained field researcher. Assistance was limited strictly to technical support, ensuring that responses reflected participants' own answers. The questionnaire was administered exclusively in Czech, and participation was limited to respondents with sufficient proficiency in the Czech language. Consequently, information on respondents' mother tongue was not collected. It was therefore assumed that all participants were able to understand and interact with AI tools in Czech, and that language-related factors did not affect the results. The data are available upon request, subject to access restrictions.

The variable of gender was measured on a binary scale: male (254; 48.7%) and female (267; 51.3). Due to the extremely low validity and frequency of self-reported identification with other genders in previous research (<1% of respondents), we were compelled to exclude the measurement of other gender identities from this study.

For the purposes of the study, age categories were created according to life stages: Adolescence and early adulthood (15–24 years; 88; 16.9%), middle adulthood (25–44 years; 202; 38.8%), late adulthood (45–59 years; 136; 26.1%), and old age (60+; 95; 18.2%). The sample shows a slight overrepresentation of younger age groups. This small deviation is unlikely to substantially affect the results, given the proportional and stratified analytical approach employed in the study.

The last of the measured independent demographic variables was the respondents' level of education, which was categorised into four groups for simplicity and comparability with prior Czech

44 Levi Checketts, 'Artificial Intelligence and the Marginalization of the Poor', *Journal of Moral Theology* 11, no. S11 (2022), <https://doi.org/10.55476/001c.34125>; Šárovec, 'Political Actors in the Age of Generative Artificial Intelligence'; Turková et al., 'Adapting to the Future'.

45 Moravec et al., 'Everyday Artificial Intelligence Unveiled'.

46 Zormanova and Vavříková, 'Attitudes of Czech and Polish Teachers Towards the Use of Artificial Intelligence in Schools'; Lnenicka and Machova, 'A Mixed-Methods Analysis of Artificial Intelligence Adoption and Perceived Impacts in Czech Municipal Administration'.

47 Alan Bryman, *Social Research Methods*, 5th ed. (Oxford University Press, 2016).

48 For reasons of replicability, the full Czech version of the questionnaire is available at <https://socialsurvey.eu/>

studies:<sup>49</sup> individuals with elementary education (38; 7.3%), individuals with vocational/apprenticeship training<sup>50</sup> (133; 25.5%), individuals with high school education (207; 39.7%), and individuals with higher (tertiary) education (143; 27.5%). Compared to the educational distribution in the Czech population, the sample is moderately skewed towards higher (tertiary) education. However, this deviation is unlikely to substantially affect the results, given the proportional and stratified analytical approach employed in the study.

The survey focused on six specific categories of AI tools—text generation, translation, grammar checking, image generation, AI tools in automobiles, and other tools such as sound or video processing. These represent the most widely used and accessible applications among the general Czech population. These categories were selected based on prior research on AI adoption patterns, pilot testing, and relevance to both every day and professional use. Other forms of AI usage, such as AI integrated into mobile photo-editing applications or niche professional software, were excluded due to their lower prevalence in general use and to maintain the survey's clarity and manageability. This approach allowed the study to concentrate on tools where meaningful variation in engagement could be observed across age and education groups. The operationalisation of AI tool usage combined multiple response components—such as type of task and frequency of use—into single survey items. This approach was chosen to reduce survey length and respondent fatigue, while pilot testing ensured clarity and comprehensibility of each item. To further support validity, examples of specific AI tools were provided for each category. Although the questionnaire did not include an explicit 'I do not know if the IT tools I use contain AI' option, the clear presentation of examples was intended to minimise ambiguity. Future research could incorporate an explicit 'unsure' category to capture respondents' awareness more precisely.

For the purposes of this research, a set of hypotheses was established, assuming a dependence of AI use on the factors of gender, age, and education. Hypotheses were tested using Pearson's chi-squared test of independence for contingency tables, supplemented by the calculation of adjusted residuals (labelled as 'z' in the tables),<sup>51</sup> which enabled a more detailed analysis of the results in cases where the null hypothesis was rejected. The statistical significance of the z-scores was evaluated using a z-test, with critical values of  $\pm 1.96$  indicating significance at the 0.05 level (marked \*),  $\pm 2.52$  indicating significance at the 0.01 level (marked \*\*), and  $\pm 3.3$  indicating significance at the 0.001 level (marked \*\*\*).

## Results

Table 1 presents respondents' self-reported ownership and usage of accounts for artificial intelligence (AI)-based services. Out of a total of 521 respondents, only a minority use AI accounts regularly: approximately 5% use them daily, and 6% use them very frequently (once every day or two). A further 13% use AI accounts occasionally (weekly), and nearly 12% use them rarely (monthly). Overall, about one-third of respondents have at least one account and use it in some capacity. A portion of respondents (approximately 9%) do not own an account but still use other AI-based services, such as translators, maps, or chat tools. A small proportion (less than 1%)

49 This differs from the ISCED standard and should be considered when comparing internationally.

50 The category 'vocational/apprenticeship education' refers to lower secondary education with a focus on practical skills and professional training. This corresponds to education completed after elementary school but before higher secondary or tertiary education. Terminology may vary across English-speaking countries; in the Czech context, it denotes the completion of formal vocational programs, often combined with apprenticeships.

51 David Sheskin, *Handbook of Parametric and Nonparametric Statistical Procedures*, 5th ed. (Chapman & Hall/CRC, 2011); Razia Azen and Cindy M. Walker, *Categorical Data Analysis for the Behavioral and Social Sciences*, 2nd ed. (Routledge, 2021).

report that they would like an account but cannot afford one, while 2.5% would like an account but do not know how to set one up. A substantial segment of the sample, however, rejects AI service accounts: nearly 18% do not consider them useful and are unsure how they would use them, and 28% explicitly report that they do not want an account due to concerns about these technologies. Additionally, 5% of respondents admit that they do not know which online services are based on AI systems.

Table 1 Use of Artificial Intelligence

<b>Do you have and use (paid or free) an account for any artificial intelligence (AI)-based services on your computer (e.g., text generators such as ChatGPT, image generators such as AI DALL-E, translators such as DeepL or Google Translator, grammar checkers such as Grammarly, etc.)?</b>		
<b>Response option</b>	<b>n</b>	<b>%</b>
I have at least one such account and use it very intensively, working with it daily	26	5%
I have at least one such account and use it very frequently (once every day or two)	33	6.3%
I have at least one such account and use it occasionally (approximately once a week)	67	12.9%
I have at least one such account and use it rarely (approximately once a month)	61	11.71%
I do not have such an account, but I would like one; however, I cannot afford it for financial reasons	5	1%
I do not have such an account, but I use AI-based services (e.g., translators, smart maps, interactive chat tools on websites, etc.)	49	9.4%
I do not have such an account and do not know which online services are or are not based on these systems	28	5.3%
I do not have such an account, but I would like one and do not know how to create it	13	2.5%
I do not have such an account and do not want one; I do not know how I would use these technologies in my work or life	93	17.9%
I do not have such an account and do not want one because I am concerned about these technologies	146	28%
Total	521	100%

Table 2 shows that the most frequently used category is translation tools (e.g., DeepL, Google Translate), actively used by nearly one-third of respondents (32.4%). The second most common category is text generation tools (e.g., ChatGPT), used by over one-fifth of participants (22%). In contrast, the remaining categories are used only marginally. Grammar-checking tools are used by 5.6% of respondents, as are AI-based automotive tools. A similar proportion applies to other tools (5). The least widely used category is image generation, actively employed by only 4.2% of respondents.

Table 2 Use of Selected Artificial Intelligence Tools

Type of AI	Text generation (e.g., ChatGPT)	Translation (e.g., Deepl, Google Translate, Microsoft Translator, Translate.com, etc.)	Grammar checking (e.g., Grammarly, Ginger, Trinka, Hemingway, etc.)	Image generation (e.g., DALL-E, Midjourney, GetIMG, ArtSmart, etc.)	AI tools in automobiles (e.g., driving assistance, automated sensors, lane monitoring, adaptive cruise control, etc.)	Other tools (e.g., sound or video processing, etc.)
<b>Use</b>	n %	n %	n %	n %	n %	n %
<b>No</b>	406 77.9%	352 67.6%	492 94.4%	499 95.8%	492 94.4%	495 95%
<b>Yes</b>	115 22%	169 32.4%	29 5.6%	22 4.2%	29 5.6%	26 5%
<b>Total</b>	521					

Differences in the use of AI accounts and attitudes towards artificial intelligence by gender were not statistically significant ( $p = 0.1906$ ); therefore, a table for this characteristic is not included in the presented results. As expected, AI is most frequently used by individuals in middle adulthood and adolescence. In contrast, active use of these technologies is markedly lower in late adulthood and particularly among the elderly. While older adults tend to fall into the group who do not have accounts and have limited knowledge of AI options, seniors often adopt a more negative stance towards these tools, citing concerns about the technology as the main reason for their reluctance.

Table 3 Differences in the Use of AI Accounts and Attitudes Towards AI by Age Group ( $p < 0.001$ )<sup>52</sup>

Response option	I have at least one such account and use it very frequently	I have at least one such account and use it occasionally	I do not have such an account and do not want one; I know almost nothing about them	I do not have such an account, but I use AI-based services (e.g., translators, smart maps, interactive chat tools on websites, etc.)	I do not have such an account, but I would like one	I do not have such an account and do not want one because I am concerned about these technologies
Age group	n z	n z	n z	n z	n z	n z
Adolescence and early adulthood	15 Z: 1.86	35 Z: 3.63***	16 Z: -1.23	10 Z: 0.69	2 Z: -0.67	10 Z: -3.82***
Middle adulthood	31 Z: 2.31*	57 Z: 1.54	37 Z: -2.11*	23 Z: 1.23	10 Z: 1.49	44 Z: -2.52*
Late adulthood	9 Z: -2.01*	26 Z: -1.72	47 Z: 3.64***	10 Z: -0.95	4 Z: -0.38	40 Z: 0.42
Old age	4 Z: -2.42*	10 Z: -3.52***	21 Z: -0.29	6 Z: -1.14	2 Z: -0.8	52 Z: 6.41***

The results presented in Table 4 indicate that the use of AI service accounts also varies according to respondents' educational attainment. Among those with vocational training, there is a below-average proportion of respondents reporting that they 'have at least one such account and use it very frequently' ( $Z = -2.56^*$ ) or 'occasionally' ( $Z = -2.96^{**}$ ). Conversely, this group shows a significantly above-average share of individuals who 'do not have any such account and do not wish to have one due to concerns about these technologies' ( $Z = 4.19^{***}$ ). Among respondents with higher education, the opposite pattern is observed: there is a higher-than-average proportion reporting that they 'have at least one such account and use it very frequently' ( $Z = 2.42^*$ ), alongside a below-average share of those who 'do not have any such account and do not wish to have one due to concerns about these technologies' ( $Z = -3.29^{**}$ ).

52 For the contingency analyses reported in Table 3, the ten response categories presented in Table 1 were collapsed into six broader groups to meet the assumptions of the chi-square test, particularly with respect to low expected frequencies in some cells. Conceptually similar response options were merged to ensure adequate cell sizes and thus maintain the validity of the statistical inference.

Table 4 Differences in the Use of AI Accounts by Educational Attainment ( $p < 0.001$ )<sup>53</sup>

Response option	I have at least one such account and use it very frequently	I have at least one such account and use it occasionally	I do not have such an account and do not want one; I know almost nothing about them	I do not have such an account, but I use AI-based services (e.g., translators, smart maps, interactive chat tools on websites, etc.)	I do not have such an account, but I would like one	I do not have such an account and do not want one because I am concerned about these technologies
<b>Education</b>	n z	n z	n z	n z	n z	n z
<b>primary education</b>	2 Z: -1.22	10 Z: 0.26	6 Z: -1.13	3 Z: -0.33	3 Z: 1.56	14 Z: 1.26
<b>apprenticeship</b>	7 Z: -2.56*	20 Z: -2.96**	34 Z: 0.74	10 Z: -0.86	6 Z: 0.77	56 Z: 4.19***
<b>high school</b>	26 Z: 0.72	55 Z: 0.86	50 Z: 0.41	20 Z: 0.16	5 Z: -1.05	51 Z: -1.4
<b>higher education</b>	24 Z: 2.42*	43 Z: 1.79	31 Z: -0.51	16 Z: 0.86	4 Z: -0.51	25 Z: -3.29**

A more detailed analysis of individual AI tools revealed that their use varies according to age, particularly for text generation tools, translation tools, and AI applications in automobiles. Differences by educational attainment were observed for text generation, translation, and grammar-checking tools. In contrast, no statistically significant differences were found according to gender for any tool. The following tables (Tables 5–10) present detailed results for the categories where differences were significant.

Regarding age, text generation tools are used most frequently by individuals in middle adulthood and adolescence (Table 5,  $p < 0.001$ ). A similar pattern is evident for AI translation tools, with the highest usage among younger and middle-aged users (Table 6,  $p < 0.001$ ). Conversely, AI tools in automobiles are most commonly used in late adulthood, while adolescents and older adults exhibit the lowest levels of use (Table 7,  $p > 0.028$ ).

53 For the contingency analyses reported in Table 4, the ten response categories presented in Table 1 were collapsed into six broader groups to meet the assumptions of the chi-square test, particularly with respect to low expected frequencies in some cells. Conceptually similar response options were merged to ensure adequate cell sizes and thus maintain the validity of the statistical inference.

Table 5. Use of Text Generation Tools by Age Group ( $p < .001$ )

Text generation (e.g., ChatGPT)	Age group					Σ
		Adolescence and early adulthood	Middle adulthood	Late adulthood	Old age	
Use	n z	n z	n z	n z	n z	Σ
No	46 z: -7.76***	155 z: -2.10*	128 z: 4.88***	99 z: 4.74***	428	
Yes	50 z: 7.76***	57 z: 2.10*	10 z: -4.88***	5 z: -4.74***	122	
Total	96	212	138	104	550	

Table 6. Use of AI Translation Tools by Age Group ( $p < 0.001$ )

Translation (e.g., DeepL, Google Translate, Microsoft Translator, Translate.com, etc.)	Age group					Σ
		Adolescence and early adulthood	Middle adulthood	Late adulthood	Old age	
Use	n z	n z	n z	n z	n z	Σ
No	52 z: -3.15**	123 z: -3.90***	108 z: 3.03**	90 z: 4.54***	373	
Yes	44 z: 3.15**	89 z: 3.90***	30 z: -3.03**	14 z: -4.54***	177	
Total	96	212	138	104	550	

Table 7. Use of AI Tools in Automobiles by Age Group ( $p > 0.028$ )

AI tools in automobiles (e.g., driving assistance, automated sensors, lane monitoring, adaptive cruise control, etc.)	Age group					Σ
		Adolescence and early adulthood	Middle adulthood	Late adulthood	Old age	
Use	n z	n z	n z	n z	n z	Σ
No	94 z: 1.54	200 z: -0.32	125 z: -2.52*	102 z: 1.70	521	
Yes	2 z: -1.54	12 z: 0.32	13 z: 2.52*	2 z: -1.70	29	
Total	96	212	138	104	550	

Differences according to educational attainment are particularly evident for text generation, translation, and grammar-checking tools. Respondents with vocational training use these tools less fre-

quently than other groups, whereas those with higher (tertiary) education employ them most extensively (Tables 8–10;  $p < 0.001$  for text generation and translation,  $p > 0.035$  for grammar-checking).

Table 8. Use of Text Generation Tools by Educational Attainment ( $p < 0.001$ )

	Education					Σ
		primary education	apprenticeship	high school	higher education	
Text generation (e.g., ChatGPT)	Use	n z	n z	n z	n z	Σ
	No	34 z: 0.51	132 z: 4.85***	161 z: -2.14*	101 z: -2.76**	428
	Yes	8 z: -0.51	11 z: -4.85***	59 z: 2.14*	44 z: 2.76**	122
	Total	42	143	220	145	550

Table 9. Use of AI Translation Tools by Educational Attainment ( $p < 0.001$ )

	Education					Σ
		primary education	apprenticeship	high school	higher education	
Translation (e.g., DeepL, Google Translate, Microsoft Translator, Translate.com, etc.)	Use	n z	n z	n z	n z	Σ
	No	34 z: 1.90	114 z: 3.54***	149 z: -0.04	76 z: -4.63***	373
	Yes	8 z: -1.90	29 z: -3.54***	71 z: 0.04	69 z: 4.63***	177
	Total	42	143	220	145	550

Table 10. Use of Grammar-Checking Tools by Educational Attainment ( $p > 0.035$ )

	Education					Σ
		primary education	apprenticeship	high school	higher education	
Grammar checking (e.g., Grammarly, Ginger, Trinka, Hemingway, etc.)	Use	n z	n z	n z	n z	Σ
	No	39 z: -0.56	141 z: 2.41*	209 z: 0.23	132 z: -2.32*	521
	Yes	3 z: 0.56	2 z: -2.41*	11 z: -0.23	13 z: 2.32*	29
	Total	42	143	220	145	550

It should be noted that both age and educational attainment appear to influence AI usage, and these factors are likely interrelated. AI is used most frequently by adolescents and individuals

in middle adulthood. Older adults show lower levels of engagement and more concerns about these technologies. Likewise, respondents with higher education report more frequent use of AI accounts and tools. Respondents with vocational training tend to use them less or avoid them due to concerns. Because age and education are correlated, it is not possible to determine from the descriptive analyses presented whether age or education is the primary factor driving AI use in certain groups. Therefore, the observed patterns may reflect overlapping influences of both variables, and more advanced analyses would be required to separate their effects. The overlapping influences suggest that younger respondents may also be more educated or exposed to AI in their studies, while older adults with lower formal education may have less experience or confidence with these tools. This highlights the need for further sociological analyses to disentangle age, education, and professional experience effects.

## Discussion

From a cultural and anthropological perspective, AI functions not only as a technical tool but also as a moral and epistemic actor, actively shaping how individuals understand truth, knowledge, and agency. As McLuhan<sup>54</sup> observed, every new medium reshapes human perception and experience. AI extends this effect by participating directly in interpretation, evaluation, and decision-making across education, science and research, politics, and entertainment. Gabriel<sup>55</sup> emphasises that AI is not a neutral tool but a cultural participant co-creating systems of meaning and moral interpretation. By mediating access to information and influencing human behaviour, AI raises new ethical and epistemological questions about responsibility, trust, and human agency, a challenge Corrêa et al.<sup>56</sup> describe as the emerging 'AI ethics boom', a collective effort to reintegrate technology into human moral and institutional frameworks.

In line with these conceptual insights, and with particular reference to McLuhan's theoretical assumptions, our study confirms that AI is driving a profound cultural transformation, shaped by age and education.

Intensive use of AI accounts remains relatively marginal. As shown in Table 1, only 5% of respondents use AI accounts daily, and approximately one-third use them at least occasionally. Translation and text generation tools are the most frequently used (Table 2), indicating that limited adoption is not purely a matter of access but is shaped by perceptions of usefulness and required skills. Concerns, uncertainty, and limited awareness represent key barriers to broader adoption. The unequal engagement with AI reflects not only disparities in access or skills but also variations in how different social groups internalise and interpret technological change.<sup>57</sup> Age appears to be inversely correlated with AI engagement: older adults and seniors use AI tools less frequently and are more likely to report apprehensions or uncertainties. Conversely, younger and middle-aged adults show higher engagement, particularly with tools requiring advanced digital or language skills, such as text generation and translation platforms. Tables 3 and 5–7 confirm these patterns. AI use in automobiles, however, is more common among older adults.

54 McLuhan and Pondělíček, *Člověk, média a elektronická kultura*.

55 Gabriel, 'Artificial Intelligence, Values, and Alignment', 2020.

56 Corrêa et al., *Worldwide AI Ethics*.

57 Jiri Pospisil and Ivana Olecka, 'Smartphones, Internet Banking, and Online Education: How Did the Covid-19 Pandemic Influence the Skills for the Digital Age', *Proceedings of 9th SWS International Scientific Conference on Social Sciences - ISCSSL 2022* 9 (December 2022): 953–60, <https://doi.org/10.35603/sws.iscss.2022/s13.113>; Ivana Olecká and Jiří Pospíšil, 'ICT Use by Czech Adolescents and Young Adults during the Period of the Covid-19 Pandemic', *EDULEARN22 Proceedings* (Palma, Spain), 14th international conference on education and new learning technologies, 2022, 119–23, <https://doi.org/10.21125/edulearn.2022.0039>.

These age-related differences may reflect variations in professional demands, prior experience with digital technologies, or cognitive comfort with AI-mediated tasks. Observations align with prior researches emphasising the susceptibility of digitally less competent users to targeted disinformation campaigns.<sup>58</sup>

Another significant factor influencing the use of AI has proven to be the level of education attained, which not only affects the likelihood of adoption but also determines the intensity of engagement in the use of AI tools that require more complex skills. Tables 4 and 8–10 indicate that higher-educated respondents use text generation, translation, and grammar-checking tools more intensively, while respondents with vocational training use them less frequently or avoid them due to concerns. Differences may be linked to prior exposure to AI-related tasks, digital literacy, and professional or academic contexts, which enhance comfort and perceived utility of AI tools.

These findings highlight the need for policies and interventions, addressing structural inequalities, as differential AI adoption by age and education suggests that unequal access to digital competencies may reinforce existing social disparities and limit informed participation in AI-mediated environments. Andrews<sup>59</sup> argues that education should cultivate individuals' capacity to understand, contest, and meaningfully contribute to algorithmic decision-making, thereby fostering trust and civic participation. Extending this argument, Ji et al.<sup>60</sup> note that discussions on existential and systemic AI risks often overlook who is actually empowered to shape the rules, highlighting that educational and cultural resources influence who can question the assumptions and values embedded in AI technologies.

Transparency and embedded values are therefore not merely technical issues but fundamentally social and educational concerns. Veale emphasises that comprehension and interpretative skills are crucial for navigating AI models, while Gabriel<sup>61</sup> warns that leaving value determinations solely to technocrats or private corporations generates power and ethical asymmetries. He advocates for 'fair alignment principles' grounded in pluralist ethics, human rights, and democratic participation, highlighting that technological literacy must be accompanied by ethical reflection to prevent cultural dominance and deepening digital inequality.

Systemic disparities are further reflected in the uneven production and adoption of AI ethical standards. Ji et al.<sup>62</sup> note that these debates often fail to discuss who shapes the rules. Whittlestone et al.<sup>63</sup> observe that 'the costs and benefits of ADA-based technologies<sup>64</sup> may be unequally distributed across groups demarcated by gender, class, or ethnicity'. They advocate 'digital citizenship education', linking technical skills with ethical and social understanding to view AI as a societal

58 Pirdaus and Surya, 'Artificial Intelligence in Politics'; Momina Masood et al., 'Deepfakes Generation and Detection: State-of-the-Art, Open Challenges, Countermeasures, and Way Forward', *Applied Intelligence* 53, no. 4 (2023): 3974–4026, <https://doi.org/10.1007/s10489-022-03766-z>; Floridi, *Čtvrtá revoluce*; Joyce Vissenberg et al., 'Digital Skills and Digital Knowledge as Buffers Against Online Mis/Disinformation? Findings from a Survey Study Among Young People in Europe', *Social Media + Society* 9, no. 4 (2023): 20563051231207859, <https://doi.org/10.1177/20563051231207859>; Kimberley Kruijver et al., 'The Disinformation Lifecycle: An Integrated Understanding of Its Creation, Spread and Effects', *Discover Global Society* 3, no. 1 (2025): 58, <https://doi.org/10.1007/s44282-025-00194-5>.

59 Andrews et al., 'A Trust Framework for Government Use of Artificial Intelligence and Automated Decision Making'.

60 Ji et al., 'Ai Alignment: A Comprehensive Survey'.

61 Gabriel, 'Artificial Intelligence, Values, and Alignment', 2020.

62 Ji et al., 'Ai Alignment: A Comprehensive Survey'.

63 Jess Whittlestone et al., 'Ethical and Societal Implications of Algorithms, Data, and Artificial Intelligence: A Roadmap for Research', London: Nuffield Foundation, 2019, 18.

64 ADA-based technologies refer to technologies built on algorithms, data, and artificial intelligence (Algorithms, Data, and AI), which are often intertwined and whose impacts may be unevenly distributed across different social groups.

phenomenon rather than a mere tool. Similarly, Corrêa et al.<sup>65</sup> document significant geographic, social, and gender-based imbalances, noting that 66% of authors of ethical AI frameworks are male. Women and minorities remain underrepresented. Education, cultural capital, and participatory skills are key to fair, responsible, and ethically informed engagement with AI. AI ethics cannot be separated from education and the formation of values that are necessary to ensure that technology serves the broader society and does not reinforce the interests of elites. Andrews<sup>66</sup> argues that public administration must educate both employees and citizens to understand digital systems, framed not only technically but also ethically and civically, restoring participation, trust, and justice through ‘participatory governance’ and an ‘open culture’ inclusive of diverse and minority perspectives. In the same way, Liu et al.<sup>67</sup> link the concept of ‘human-centred AI’ to education, participation, and inclusion, identifying education as a key predictor of AI utilisation. Analogously, Ferretti<sup>68</sup> argues that problems such as misinformation, algorithmic discrimination, and unequal access to employment are rooted not only in technology itself but in institutional failings, including insufficient educational opportunities and weakened systems of social protection. AI therefore reveals rather than generates inequalities, exposing deeper cultural and educational deficiencies that require systemic solutions.<sup>69</sup>

Against this backdrop, the Centre for AI and Digital Policy<sup>70</sup> underscores that digital literacy and education are essential for democratic AI governance. Educational and ethical policy are pivotal for responsible technology use. Digital competence influences not only technology adoption but also citizen trust in digital systems, including autonomous vehicles and transport networks<sup>71</sup>. This conclusion is supported by studies emphasising value and media literacy as prerequisites for ethical AI utilisation.<sup>72</sup>

Psychological and cultural consequences of human–AI interaction shape both individual autonomy and collective behaviour. Slattery et al.<sup>73</sup> highlight risks of diminished autonomy, overreliance on machine outputs, and weakened interpersonal relationships, noting that excessive dependence on algorithms can undermine independent critical reflection and reshape how individuals learn, create, and construct identity in digital environments.<sup>74</sup>

Overall, the human-AI relationship is multilayered, shaped by technological, cultural, and socio-demographic variables such as age, education, and gender, which we examined in our study. Research repeatedly demonstrates that these factors strongly influence digital competence, technology adoption, and engagement with AI-mediated environments,<sup>75</sup> as well as the ways innovations are interpreted and applied.

Socioeconomic status was not in this study explicitly measured; it focused primarily on age,

65 Corrêa et al., *Worldwide AI Ethics*.

66 Andrews et al., ‘A Trust Framework for Government Use of Artificial Intelligence and Automated Decision Making’.

67 Liu et al., *Understanding Artificial Intelligence*.

68 Ferretti, ‘Value Alignment Without Institutional Change Cannot Prevent the Societal Risks of Artificial Intelligence’.

69 Danielsson et al., ‘Artificial Intelligence and Systemic Risk’.

70 Center for AI and Digital Policy, ‘Artificial Intelligence and Democratic Values 2025: AI Policy Leadership for the 21st Century’, CAIDP, 2025, <https://www.caidp.org/aidv2025>.

71 Patrick Zandl, *Mýty a naděje digitálního světa: vše, co potřebujete vědět o kryptoměnach, umělé inteligenci a dalších převratných technologiích*, 1st ed. (Jan Melvil Publishing, 2022).

72 Foltýnek and Newton, ‘What Does YouTube Advise Students About Bypassing AI-Text Detection Tools?’

73 Slattery et al., ‘The AI Risk Repository’.

74 Táborský, *V síti (dez)informací*.

75 Galaz et al., ‘Artificial Intelligence, Systemic Risks, and Sustainability’; Andrews et al., ‘A Trust Framework for Government Use of Artificial Intelligence and Automated Decision Making’; Ferretti, ‘Value Alignment Without Institutional Change Cannot Prevent the Societal Risks of Artificial Intelligence’.

gender, and educational differences. However, literature indicates that access to and use of AI is also related to socio-economic factors. Elisa Bassignana et al.<sup>76</sup> empirically demonstrate that socioeconomic status significantly influences how people use generative AI tools. Differences are observed, for example, in interaction styles and the ways in which LLMs are utilised across different SES groups. Similarly, when Fang, Xu & Ng<sup>77</sup> analyse the digital divide, they confirm that sociodemographic and socioeconomic factors (including family SES) influence access to digital technologies.

These social and educational disparities are not merely of academic concern; they create tangible vulnerabilities in societal security and resilience. The spread of generative and data-driven technologies has also intensified the so-called post-truth condition, in which the distinction between fact and fiction becomes blurred. Deepfake technologies,<sup>78</sup> algorithmic curation, and automated content creation illustrate the dual nature of AI: while enabling creativity and efficiency, they simultaneously open the door to manipulation, misinformation, and social polarisation. These dynamics highlight the transformative power of AI not only at the technological but also at the cultural and moral levels.<sup>79</sup> The results of this study highlight pressing security challenges associated with the uneven adoption of AI technologies. Differential engagement and varying digital competencies create systemic vulnerabilities that can be exploited in information warfare, political manipulation, and hybrid threat scenarios. Populations with limited AI literacy—particularly older adults or those with lower formal education—are more susceptible to disinformation campaigns, including deepfake videos, AI-generated text, and automated translation tools that can be weaponised to influence public opinion or destabilise democratic processes.<sup>80</sup> Digitally less competent users are more vulnerable to targeted disinformation.<sup>81</sup> At the same time, overreliance on algorithmic systems among younger and digitally advanced users can produce new dependencies, leading to what Slattery et al.<sup>82</sup> describe as the ‘delegation of judgment’. Both extremes challenge the notion of human autonomy central to the humanities and theology.

These dynamics also have broader strategic implications. High engagement among younger, digitally proficient groups may accelerate the dissemination of AI-mediated content, which can be co-opted by malign actors for psychological operations or targeted influence campaigns. Conversely, lower adoption among other demographics limits their resilience, potentially creating information ‘blind spots’ that adversaries could exploit. In this sense, AI adoption is not merely a matter of technological uptake but a critical factor in societal security and national resilience. While regulatory frameworks such as the EU’s AI Act and transparency initiatives are essential, they are insufficient on their own, as our findings indicate that AI engagement varies substantially

76 Elisa Bassignana et al., ‘The AI Gap: How Socioeconomic Status Affects Language Technology Interactions’, version 2, preprint, arXiv, 2025, <https://doi.org/10.48550/ARXIV.2505.12158>.

77 Xiaoxuan Fang et al., ‘Exploring the Influence of Sociodemographic and Socioeconomic Factors on the Digital Divide in Higher Education’, *Education Sciences* 15, no. 12 (2025): 1690, <https://doi.org/10.3390/educsci15121690>.

78 Deepfake technology, often based on generative adversarial networks (GANs), exemplifies the dual-edged nature of AI. GANs employ two neural networks—a generator and a discriminator—to produce content that is increasingly difficult to distinguish from genuine audiovisual material. Deepfakes can simulate political leaders or public figures, creating videos that are visually and aurally almost indistinguishable from reality. The accessibility of such technologies means that not only professional teams but also individuals with minimal technical expertise can generate and disseminate manipulated content, particularly via social media platforms designed to amplify emotionally charged material. Consequently, misleading content can achieve viral reach within hours, influencing public opinion faster than traditional media or political actors can respond Emil Mleziva, *Diktatura informací: jak s námi informace manipulují*, 1st ed. (Čeněk, 2004).

79 Masood et al., ‘Deepfakes Generation and Detection’.

80 Mleziva, *Diktatura informací*; Masood et al., ‘Deepfakes Generation and Detection’; Pirdaus and Surya, ‘Artificial Intelligence in Politics’.

81 Galaz et al., ‘Artificial Intelligence, Systemic Risks, and Sustainability’.

82 Slattery et al., ‘The AI Risk Repository’.

across demographic groups. Educational and cultural strategies are therefore necessary to strengthen ethical reasoning, critical reflection, and civic dialogue, particularly among populations with lower digital competence. Institutional responsibility cannot be reduced to technical oversight—it must include fostering the human capacity for discernment in a world increasingly co-shaped by machines.

While the technology itself is not morally neutral—the values and intentions of its creators shape its design and potential applications—the ultimate responsibility for its deployment lies with the owners and users of the technology. Regulatory frameworks are emerging; for example, the European Union has introduced measures aimed at detecting and preventing deepfake videos and promoting transparency in social media algorithms. Digital literacy and public education also play an essential role in enabling citizens to critically engage with AI-influenced political environments.<sup>83</sup>

Addressing these risks requires an integrated strategy that goes beyond purely technical oversight, since the observed demographic differences in AI use suggest that vulnerabilities arise not only from system design but also from uneven digital literacy and interpretative capacity. Regulatory initiatives—such as EU measures on transparency and deepfake detection—must be complemented by safeguards embedded directly into system design and by accountability mechanisms that protect the public sphere from manipulation and exploitation. The demographic disparities observed in this study illustrate not only uneven access to technological benefits but a deeper transformation of agency and participation in digitally mediated environments. A human-centred approach is therefore essential: one that integrates ethical reflection, cultural diversity, and critical literacy. In this respect, the humanities and social sciences play an indispensable role in understanding AI as a transformation of meaning and community—not merely as a technical evolution.

Effective management of the risks arising from the use of AI requires interdisciplinary collaboration across security studies, policy-making, ethics, and technology governance. By aligning technological development with security-conscious frameworks, societies can harness the benefits of AI while reducing the potential for destabilising applications in political, social, and strategic contexts.

While our results show differences in AI use across age and educational groups, it is not possible to clearly separate the influence of age and education alone using the descriptive statistics used here. As already noted, the observed patterns may reflect differences in prior educational experience, professional contexts, or other factors. Further empirical sociological research could provide deeper insight into the underlying reasons for these differences and enhance the interpretation of these findings. Our descriptive findings provide preliminary evidence of the role of age and education, but more nuanced analyses, potentially including multivariate models, are needed to clarify causal pathways and interactions between demographic factors, tool type, and adoption intensity.

AI represents both a transformative opportunity and a profound challenge. Its applications in political communication, media production, and social influence highlight the urgent need for interdisciplinary research and ethical frameworks that balance innovation with the protection of public trust and democratic integrity. Future work should explore mechanisms for mitigating risks while maximising the societal benefits of AI technologies. Moreover, while global research increasingly explores AI's societal implications, little is known about demographic and educational differences in its adoption in the Czech Republic.

---

83 Pirdaus and Surya, 'Artificial Intelligence in Politics.'

## Conclusions

This study provides an empirical insight into AI adoption patterns within the Czech Republic, demonstrating that engagement with AI tools remains concentrated primarily among younger and higher-educated users. Older adults and individuals with lower educational attainment adopt such tools more cautiously. These sociodemographic disparities are directly supported by the data and clearly shape patterns of access and usage.

The discussion of associated risks, ethical challenges, and potential vulnerabilities should be understood as a conceptual interpretation rather than a direct empirical finding. Drawing on literature in the humanities and social sciences, it can be assumed that groups with limited AI literacy could be more susceptible to misinformation, manipulation, or unequal access to emerging technological benefits. These outcomes were not directly measured in this study.

From a policy perspective, three domains emerge as particularly relevant based on both empirical patterns and theoretical considerations:

1. Educational measures – strengthening digital and ethical literacy across age and professional groups;
2. Institutional safeguards – ensuring transparency, explainability, and fairness in public and commercial AI deployments;
3. Cultural dialogue – supporting value-oriented debates about human dignity, autonomy, and justice in digital societies.

Promoting equitable access to AI is not only a technical challenge but also a civic and ethical responsibility. By integrating technological innovation with critical reflection and inclusive education, societies can mitigate risks while safeguarding human autonomy and diversity.

### Contact

#### ***Dr. Ivana Olecká***

Police Academy of the Czech Republic in Prague  
Faculty of Security and Law  
Department of Criminology  
Lhotecká 559/7, 143 01 Praha 4, Czech Republic  
olecka@polac.cz

#### ***Assoc. Prof. Dr. Josef Smolík***

Police Academy of the Czech Republic in Prague  
Faculty of Security Management  
Department of Security Studies  
Lhotecká 559/7, 143 01 Praha 4, Czech Republic  
smolik@polac.cz

# Artificial Intelligence in Psychotherapy: experiences of Aftercare Programme Clients

Kristýna Hellerová, David Urban, Jana Hamhalterová

DOI: 10.32725/cetv.2026.008

## Abstract

AI tools are increasingly present in mental health and addiction aftercare, yet little is known about clients' perspectives in these settings. This qualitative study examines how adults in Czech aftercare programmes experience AI-supported tools across emotional, cognitive, and ethical dimensions. Using reflexive thematic analysis (Braun and Clarke) of transcribed semi-structured interviews with five clients in post-treatment recovery, the analysis identified themes of emotional support, cognitive structuring, and ambivalence regarding trust, relational authenticity, and data privacy. The findings suggest that AI can complement psychosocial care by supporting self-reflection and between-session preparation, while remaining clearly distinct from the therapeutic alliance. Implications include guidance for hybrid models in social work and addiction services, emphasising digital literacy, informed use, and clinician oversight within ethically governed frameworks.

**Keywords:** artificial intelligence, psychotherapy, mental health, aftercare, qualitative research, addiction recovery, client experience, ethical aspects

## Introduction

### *AI-Assisted CBT and Ethical Perspectives in a Czech Context: CBT and AI Therapeutic Mechanisms*

Digital mental health apps have shown small but significant effects on symptoms of depression and anxiety. According to a recent meta-analysis of 176 randomised controlled trials, their effectiveness increases when the apps incorporate cognitive-behavioural therapy (CBT) features, mood-monitoring functions, or chatbot technology. These characteristics were associated with larger effect sizes compared to apps without such components.<sup>1</sup>

A randomised controlled trial demonstrated that a fully automated conversational agent based on cognitive-behavioural principles was able to reduce depressive symptoms among university

<sup>1</sup> Jake Linardon et al., 'Current Evidence on the Efficacy of Mental Health Smartphone Apps for Symptoms of Depression and Anxiety: A Meta-Analysis of 176 Randomized Controlled Trials', *World Psychiatry* 23, no. 1 (2024): 139–149, <https://doi.org/10.1002/wps.21183>.

students over a two-week intervention.<sup>2</sup> Evidence from a randomised controlled trial shows that a culturally adapted AI chatbot grounded in cognitive-behavioural principles can significantly decrease depressive symptoms and loneliness among Chinese university students over a brief, seven-day intervention.<sup>3</sup> Qualitative findings indicate that users often experienced generative AI chatbot conversations as an ‘emotional sanctuary’, offering insights into issues such as trauma and relationships, while also expressing a desire for improvements including stronger safety guardrails and more consistent memory.<sup>4</sup> Findings from mediation analyses in digital cognitive-behavioural interventions indicate that improvements in pain self-efficacy and reductions in pain-related disability may function as key mechanisms through which these programmes alleviate depressive symptoms.<sup>5</sup>

## Ethical and Critical Frameworks

Catholic social teaching and recent Vatican initiatives emphasise that artificial intelligence must respect human dignity and uphold relational values. The Rome Call for AI Ethics affirms that all people possess equal dignity and that AI should serve and protect human beings rather than expose them to harm. It further stresses that AI should be developed in ways that promote human well-being, prevent discrimination and unjust harm, and support the inclusion and protection of those who are most vulnerable.<sup>6</sup> The Vatican City State’s AI Guidelines likewise emphasised that technology must place people at the centre. They state that artificial intelligence can never replace humans and must respect human autonomy, and that its use should remain transparent, non-discriminatory and consistently subject to human decision-making.<sup>7</sup>

Crucially, Christian anthropology underscores relationality: human beings are, by their very nature, ordered to interpersonal communion, and human intelligence is exercised in relationships, finding its fullest expression in dialogue, collaboration, and in love and service to others.<sup>8</sup> The recent Curial document *Antiqua et nova* stresses that human intelligence attains its fullest expression in relationships marked by dialogue, collaboration and solidarity, rather than in isolation. In light of this relational anthropology, AI tools used in therapeutic contexts should strengthen authentic human connection, fostering social support and compassion rather than detachment. Taken together, current Catholic ethical frameworks call for AI-assisted therapeutic tools to respect human dignity and rights, avoid bias or exploitation, and support the human vocation to community and love.<sup>9</sup>

2 Kathleen K. Fitzpatrick, Alison Darcy, and Molly Vierhile, ‘Delivering Cognitive Behavior Therapy to Young Adults With Symptoms of Depression and Anxiety Using a Fully Automated Conversational Agent (Woebot): A Randomized Controlled Trial’, *JMIR Mental Health* 4, no. 2 (2017): e19, <https://doi.org/10.2196/mental.7785>.

3 Yining Wang et al., ‘Effect of a Cognitive Behavioral Therapy-Based Artificial Intelligence Chatbot on Depression and Loneliness Among Chinese University Students: Randomized Controlled Trial With Financial Stress Moderation’, *JMIR mHealth and uHealth* 13 (2025): e63806, <https://doi.org/10.2196/63806>.

4 Steve Siddals, John Torous, and Astrid Coxon, ‘It Happened to Be the Perfect Thing’: Experiences of Generative AI Chatbots for Mental Health’, *NPJ Mental Health Research* 3, no. 1 (2024): Article 48, <https://doi.org/10.1038/s44184-024-00097-4>.

5 Arne G. Lutsch et al., ‘Mechanisms of Change in Digital Cognitive Behavioral Therapy for Depression in Patients With Chronic Back Pain: A Mediation Analysis of a Multicenter Randomized Clinical Trial’, *Behaviour Research and Therapy* 168 (2023): 104369, <https://doi.org/10.1016/j.brat.2023.104369>.

6 Pontifical Academy for Life, *Rome Call for AI Ethics*, Rome, 28 February 2020.

7 Pontifical Commission for Vatican City State, *The Principles behind the Guidelines on Artificial Intelligence*, (Vatican City State, 16 January 2025).

8 Dicastery for the Doctrine of the Faith, *Antiqua et nova: Note on the Relationship Between Artificial Intelligence and Human Intelligence*, (Vatican City, 28 January 2025).

9 Pontifical Academy for Life, *Rome Call for AI Ethics* (Vatican City: Pontifical Academy for Life, 2020); Pontifical Commission of Vatican City State, *The Principles behind the Guidelines on Artificial Intelligence* (Vatican City State, 2025); Congregation for the Doctrine of

## Czech Research

In the Czech Republic, mental-health care is increasingly addressing the development of community-based and multidisciplinary models, yet substantial systemic gaps persist. The National Mental Health Action Plan 2020–2030 emphasises the expansion of integrated community mental-health services alongside efforts to reduce the dominance of inpatient and subsequent-care institutions.<sup>10</sup> However, experts indicate that continuity of care remains weak in practice. A qualitative study on post-accident psychological support found that follow-up services are unevenly distributed and fragmented: affected individuals often encounter long waiting times or financial barriers to accessing therapy, and many are not captured by the aftercare system at all. The authors conclude that there is ‘no simple and well-connected system’ securing continuity between immediate crisis response and longer-term psychological support.<sup>11</sup> Moreover, Czech stakeholders point to the lack of systematic data collection, and the national reform documents themselves call for stronger monitoring mechanisms and evidence-based evaluation.<sup>12</sup> On the whole, current practice continues to show significant deficits in the integration of aftercare, with many individuals remaining outside the follow-up system. At the same time, empirical research on digital CBT or AI-supported mental-health interventions is still largely absent in the Czech context.<sup>13</sup>

## Research Questions

In light of the limited empirical research on AI use in Czech addiction aftercare contexts, the present study was guided by the following research questions:

1. How do clients in addiction aftercare describe their use of AI tools in everyday and therapeutic contexts?
2. How do clients make sense of the emotional and cognitive functions of AI in their recovery process?
3. How do clients describe the role of AI in relation to the therapeutic relationship and professional support?
4. What concerns or ethical reflections (e.g., trust, authenticity, data privacy) emerge in their accounts?

## Methodology

This study employed a qualitative design grounded in reflexive thematic analysis, as articulated by Braun and Clarke.<sup>14</sup> Reflexive thematic analysis is an interpretative approach suited to exploring how participants make sense of their experiences and to generating meaning-based patterns across qualitative data. The aim of the study was not to assess prevalence or effectiveness, but to examine how clients in addiction aftercare programmes understand, experience, and articulate

---

the Faith, *Antiqua et nova: Note on the Relationship Between Artificial Intelligence and Human Intelligence* (Vatican City, 2025).

10 Ministerstvo zdravotnictví České republiky, *Národní akční plán pro duševní zdraví 2020–2030: Příloha č. 2 – Analytická část* (Praha: Ministerstvo zdravotnictví, 2020).

11 David Červinka et al., ‘Comprehensive System of Post-Accident Care in the Czech Republic – A Qualitative Study’, in *Proceedings of the 14th International Conference on Applied Human Factors and Ergonomics (AHFE 2023)* (AHFE International, 2023), 194, <https://doi.org/10.54941/ahfe1003805>.

12 Ministerstvo zdravotnictví ČR, see note 10.

13 Červinka et al., *Comprehensive System...*, see note 11.

14 Virginia Braun and Victoria Clarke, ‘Toward good practice in thematic analysis: Avoiding common problems and be(com)ing a knowing researcher’, *International Journal of Transgender Health* 24, č. 1 (2023): 1, <https://doi.org/10.1080/26895269.2022.2129597>.

their use of artificial intelligence (AI) tools, with particular attention to emotional, cognitive, and ethical dimensions.

Data were generated through semi-structured interviews conducted as part of routine aftercare activities. Clients were approached by an aftercare practitioner and invited to participate voluntarily in the study. Interviews invited participants to reflect on their experiences with AI tools, including perceived benefits, concerns, and the relationship between AI use and their therapeutic process. Interviews were transcribed into a text format for analysis, producing concise, experience-focused accounts situated within the practical realities of aftercare settings. The AI tools discussed by participants primarily included large language model-based conversational systems, most notably ChatGPT, as well as various mobile chatbot applications used for emotional support, reflection, or thought organisation. Participants referred to these tools in general terms, reflecting everyday, self-initiated use rather than systematic or clinically guided digital interventions.

The sample consisted of five adult clients (three women and two men) aged 28–53 years, all of whom had completed primary addiction treatment and were engaged in aftercare following alcohol or methamphetamine dependence. The limited sample size reflects the exploratory and context-specific nature of the study, as well as the voluntary character of participation; additional clients declined to take part.

In line with reflexive thematic analysis, the study does not aim at statistical generalisation. Instead, the sample was considered analytically sufficient for developing an interpretative understanding of recurring patterns of meaning within this specific context. During analysis, attention was paid to the demographic and experiential context of participants, including age range and type of substance dependence, as factors that may shape familiarity with digital technologies, trust in AI systems, and patterns of use. These variables functioned as analytically sensitising contexts rather than as bases for formal comparison.

All participants provided written informed consent prior to participation. Participants were informed about the aims of the study, the voluntary nature of their involvement, and their right to withdraw at any time without consequences for their care. All data were anonymised prior to analysis, securely stored, and used solely for research purposes.

Data analysis followed the six phases of reflexive thematic analysis described by Braun and Clarke:

- (1) familiarisation with the data;
- (2) generation of initial codes;
- (3) construction of candidate themes;
- (4) review and refinement of themes;
- (5) definition and naming of themes;
- (6) production of the analytic narrative.

Coding was conducted inductively and at a semantic level, focusing on participants' explicit accounts while remaining attentive to emotional and relational meanings embedded in the data. Themes were not treated as entities that 'emerged' from the data, but were actively generated through iterative and reflexive engagement with the written material. Reflexive memos were maintained throughout the analytic process to support transparency and theoretical sensitivity. Interpretative credibility was supported through ongoing analytic discussions with a co-author who works directly with the client group in the aftercare setting. These discussions served to contextualise interpretations and challenge premature conclusions, rather than to verify a single correct or objective reading.

## Characteristics of AI Use Among Participants

Participants reported heterogeneous patterns of AI use. Two participants explicitly referred to ChatGPT as the primary tool they used, with one describing near-daily use. Another participant reported using AI tools more generally (e.g., chatbots, translation tools, or search-based systems) without identifying specific platforms. The remaining participants referred to AI in broader terms (e.g., ‘AI tools’ or ‘technology’), and one participant reported no prior use of AI tools at all.

Frequency of use varied considerably across participants. One participant described near-daily use of AI tools. Others reported occasional or situational use, including one-time use to solve a specific practical issue or exploratory use motivated by curiosity. In one case, AI was used during a period of acute emotional distress following the death of a close person. Some participants described recurrent but unspecified use when seeking clearer answers or structured responses.

With regard to purpose, participants described using AI for:

- emotional articulation and crisis coping,
- cognitive structuring of thoughts,
- preparation for therapy sessions,
- practical information-seeking (e.g., recipes, legal information, everyday administrative matters).

The study did not systematically collect longitudinal usage metrics (e.g., duration of use in months or years). Participants referred primarily to current or recent patterns of use and to specific past situations in which AI was employed. As such, the analysis focuses on participants’ meaning-making rather than behavioural quantification of AI engagement.

## Results

Of the five participants included in the study, four reported personal experience with AI tools (P2–P5), while one participant (P1) stated that she had never used AI. The thematic analysis therefore draws primarily on the accounts of these four AI users, while also considering the absence of experience as analytically relevant in understanding the boundaries of AI engagement in aftercare contexts.

The sample comprised three women and two men aged 28–53 years, all enrolled in Czech addiction aftercare programmes following treatment for alcohol or methamphetamine dependence. Their duration in aftercare ranged from two to seven months. Basic anonymised characteristics are provided below:

Participant	Gender	Age	Substance	Aftercare Duration
P1	Female	37	Alcohol	2 months
P2	Female	53	Alcohol	5 months
P3	Male	35	Methamphetamine	7 months
P4	Female	28	Alcohol	4 months
P5	Male	42	Alcohol	6 months

Participants’ experiences were captured through semi-structured interviews that were subsequently transcribed into text for analysis, producing concise, experience-focused interview accounts describing perceived benefits, perceived risks, and the ways AI tools were understood

and positioned in relation to participants' therapeutic process. In accordance with the principles of reflexive thematic analysis, the Results are presented as an interpretative account of meaning patterns across the interview material, rather than as a summary of individual responses or their frequency. The analysis does not aim to establish prevalence, causality, or effectiveness, but focuses on how participants made sense of AI use within the specific context of addiction aftercare. The thematic analysis identified five interrelated thematic areas, which reflect recurring meaning orientations across the interview transcripts:

- (1) AI as emotional support,
- (2) AI as a cognitive structuring aid,
- (3) trust and mistrust in AI,
- (4) the perceived influence on the therapeutic relationship,
- (5) awareness of data vulnerability.

These themes should not be understood as discrete or isolated categories, but as analytically connected aspects of participants' meaning-making, which frequently overlapped and informed one another within interview accounts. Rather than 'emerging' from the data, the themes were constructed through reflexive engagement with the transcribed interview material, with attention to how participants linked emotional, cognitive, and ethical considerations when describing their experiences with AI tools

### *AI as Emotional Support*

Emotional support emerged as a salient but not universally shared theme, articulated primarily by two participants (P3 and P5). Other participants did not describe AI as emotionally meaningful to the same extent, framing it rather as a practical or informational tool. Emotional reliance on AI therefore represents a specific experiential pattern within this sample rather than a dominant cross-case tendency.

In contrast, P5 positioned AI as a crisis-management tool rather than a general source of emotional reassurance. She described using AI during a period of bereavement: *'I wasn't sure what I was feeling, but writing it to the bot helped me realise it.'* (P5) P5 further explained that AI provided step-by-step support that helped her regulate emotions and avoid relapse into alcohol use. In her account, AI facilitated emotional awareness through articulation and structured reflection rather than through reciprocal emotional understanding.

Notably, P4 explicitly rejected the idea that AI could provide genuine emotional support, emphasising that empathy and relational attunement are inherently human qualities. This contrast further underscores that emotional engagement with AI was present but not evenly distributed across participants.

### *AI as a Cognitive Structuring Aid*

The cognitive structuring function of AI was the most consistently described theme across AI users (P2–P5), although with varying intensity and depth. Participants described using AI to clarify thoughts, formulate questions, or prepare for therapeutic encounters. For P2, this function was primarily practical: *'It helped me with clearly formulated answers to my questions.'* (P2) P4—despite her broader scepticism toward AI—reported using it once to assist with practical administrative steps, illustrating that even limited users

engaged with AI as a structuring tool in concrete situations. For P3 and P5, cognitive structuring extended into the therapeutic domain. P5 described using AI prior to therapy sessions: *'Before going to an individual session, I was able to partly work through things with the help of AI and then discuss more of them face to face'*. (P5) P3 indicated that some topics felt sufficiently processed through AI interaction and therefore required less discussion in therapy. Taken together, cognitive support represents the most widely shared and stable function of AI within this sample, spanning both practical and therapeutic contexts.

### *Trust and Mistrust in AI*

Trust in AI tools emerged as a polarised theme within the dataset. While one participant (P4) expressed explicit mistrust and strong concerns regarding data misuse, the remaining AI users (P2, P3, and P5) adopted more pragmatic or indifferent stances toward potential risks. This division suggests that privacy awareness was not evenly distributed across participants but clustered around a single strongly sceptical case. In some interview accounts, trust was framed pragmatically, with limited reflection on potential risks and a primary focus on immediate usefulness: *'I never thought about risks. It helped, and that's what mattered'*. (P2)

P2's account reflects a pragmatic orientation in which usefulness outweighed consideration of data security.

In contrast, P4 articulated explicit scepticism and concern about data handling: *'I don't really believe it. I'm afraid the data could be misused'*. (P4) Here, mistrust was closely linked to uncertainty about data governance and a reluctance to disclose personal or sensitive information.

P5 acknowledged that data misuse was theoretically possible but did not experience significant fear or hesitation when interacting with AI, illustrating a position between explicit concern and active indifference.

Taken together, trust in AI was not described as a stable or uniform attitude but as context-dependent and shaped by individual perceptions of risk and personal comfort with technology.

### *Influence on the Therapeutic Relationship*

The perceived influence of AI on the therapeutic relationship was differentiated rather than uniform across participants. None of the AI users described AI as a full replacement for therapy; however, the degree of complementarity varied.

For most participants (P2, P4, and P5), AI was framed as a preparatory or supplementary tool rather than a substitute for professional care. P5 described using AI to clarify themes prior to sessions *'I used it to clarify things I later discussed with my therapist'*. (P5) In his account, AI and the therapist functioned as complementary dialogical partners, whose perspectives he compared and integrated.

P3 represented the most substitution-oriented stance. He suggested that in certain cases AI interaction reduced the perceived need to process specific issues during therapy sessions: *'I didn't really need therapy'*. (P3) This statement indicates a momentary functional substitution of selected topics rather than a rejection of therapy as such.

In contrast, P4 explicitly rejected the idea that AI could replace the human dimension of therapy, emphasising that empathy and relational attunement cannot be substituted by technological tools. P2 similarly reported no meaningful change in her perception of therapy as a result of AI use.

Overall, AI was most commonly described as shaping how participants entered therapy sessions—helping them prioritise themes, articulate concerns, or organise thoughts—without fundamentally displacing the relational core of therapeutic work.

### *Awareness of Data Vulnerability*

Participants demonstrated a clear divergence in their perception of privacy risks, ranging from active refusal to share personal data to a relative absence of reflection on the issue. The interview material indicates that for the majority of AI users (P2, P3, P5), privacy was not a primary concern during their interaction with AI. Both P2 and P3 explicitly stated that they had ‘never thought about’ what happens to their personal data. P5 represented a more nuanced position, noting a lack of fear regarding AI specifically while acknowledging broader internet-related risks: *‘I don’t really deal with it and I don’t feel fear that AI would specifically misuse it. But I know that there are other applications on the internet that can misuse data.’* (P5)

In contrast, the account of P4 represents a distinctly cautious orientation within the sample. Her explicit concern about data governance directly limited her engagement with the tool. She expressed a proactive refusal to share sensitive content:

*‘I think about it a lot, and for that reason, I don’t use it [AI] much. I refuse to share my personal, inner information so that it doesn’t get ‘gathered’ somewhere.’* (P4)

Taken together, these accounts reveal a spectrum of digital literacy and risk perception. While most participants prioritised the immediate utility of the tool over abstract data concerns, P4’s experience demonstrates that for some individuals in aftercare, perceived lack of confidentiality may constitute a meaningful barrier to AI use.

### *Cross-case Synthesis of AI Use*

Across participants, two distinct patterns of AI engagement can be identified. First, cognitive structuring emerged as the most consistent and widely shared function of AI use. All participants with prior experience of AI (P2–P5), including those who were otherwise sceptical, described using AI to organise thoughts, clarify questions, or prepare for practical or therapeutic situations. This suggests that cognitive support represents a stable cross-case pattern within the dataset.

In contrast, emotional engagement with AI was unevenly distributed. Only two participants (P3 and P5) described AI as emotionally meaningful, particularly in contexts of distress or personal difficulty. Other participants framed AI primarily as a practical or informational tool, and one participant (P4) explicitly rejected the possibility of emotional support from AI. Emotional use of AI therefore appears as a case-specific rather than a generalised pattern.

A similar differentiation was evident in relation to trust and data privacy. While most participants adopted a pragmatic stance focused on immediate usefulness, concerns about data misuse were concentrated in a single case (P4), where they directly limited engagement with AI. This indicates that attitudes towards trust were not uniformly distributed but clustered around individual perceptions of risk.

Taken together, the findings suggest that while certain functions of AI—particularly cognitive structuring—are shared across participants, other aspects, such as emotional reliance or trust, are shaped by individual experiences, beliefs, and situational contexts.

## Discussion

The present study explored how clients in addiction aftercare experience AI tools in the context of their emotional wellbeing and therapeutic engagement. The findings are broadly consistent with international literature, which identifies both the perceived benefits and limitations of AI-based support in mental health contexts. Although the sample size was small ( $n = 5$ ), this is aligned with the principles of reflexive thematic analysis, which prioritises depth, nuance, and richness of individual accounts over statistical generalisation or representativeness.

A recurring theme across studies is the utility of AI tools for emotional expression and regulation. In the present study, AI chatbots were described as supporting the articulation of difficult emotions, particularly in situations where interpersonal support felt limited. Similar patterns are reflected in recent research, which shows that AI-based mental-health tools can offer users a non-judgmental and private space for expressing emotions, often accompanied by supportive or validating responses.<sup>15</sup> Qualitative research in alcohol and other drug counselling likewise suggests that AI-driven chatbots may improve accessibility and efficiency in hybrid human–AI models, but are still perceived as lacking the empathy and relational depth associated with human care.<sup>16</sup> The findings also suggest that AI tools may facilitate reflection and cognitive organisation prior to therapy. These accounts mirror findings from recent research showing that conversational AI can support users in structuring their thoughts, clarifying emotional states and setting goals related to their mental health.<sup>17</sup> A recent qualitative study of user reviews of the Wysa mental-health chatbot similarly found that users valued its structured, supportive conversations that fostered self-reflection, while at the same time expressing concerns about the system's reliability and data privacy.<sup>18</sup> A key point of convergence lies in the ambivalence toward AI's capacity for relational depth. While strong trust and reliance on AI were present in individual accounts, most respondents viewed AI as a supportive tool rather than a replacement. These findings align with recent qualitative research on wearable-based digital detection systems in substance use treatment, which showed that AI-driven monitoring can increase self-awareness and support the management of stress and craving, while being used as an adjunct to, rather than a replacement for, human therapeutic care.<sup>19</sup> The concern for trust and data privacy, also reflected in the present study, reflects broader discussions about users' comfort and perceived safety when engaging with AI tools. Survey data from India similarly show that worries about data privacy and security are among the main reasons why people remain cautious about using AI-driven mental-health applications.<sup>20</sup> Recent US survey data show that adolescents and young adults frequently turn to generative AI for emotional support and often perceive these tools as private or safe spaces, despite limited awareness of the associated risks and the lack of transparency behind AI-generated mental-health advice.<sup>21</sup> These patterns are echoed in recent work on general-purpose LLM chatbots for mental health, where

15 Fahad Alanezi, 'Assessing the Effectiveness of ChatGPT in Delivering Mental Health Support: A Qualitative Study', *Journal of Multidisciplinary Healthcare* 17 (2024): 461–471, <https://doi.org/10.2147/JMDH.S447368>.

16 Anthony Barnett et al., 'Enacting "More-Than-Human" Care: Clients' and Counsellors' Views on the Multiple Affordances of Chatbots in Alcohol and Other Drug Counselling', *International Journal of Drug Policy* 94 (2021): 102910, <https://doi.org/10.1016/j.drugpo.2020.102910>.

17 Alanezi, *Assessing the Effectiveness...* see note 14.

18 Beenish M. Chaudhry and Happy R. Debi, 'User Perceptions and Experiences of an AI-Driven Conversational Agent for Mental Health Support', *mHealth* 10 (2024): 22, <https://doi.org/10.21037/mhealth-23-55>.

19 Jazmin Hampton et al., 'Digital Detection of Craving and Stress for Individuals in Recovery from Substance Use Disorder: A Qualitative Study', *Drug and Alcohol Dependence Reports* 15 (2025): 100336, <https://doi.org/10.1016/j.dadr.2025.100336>.

20 Mahima Anna Varghese et al., 'Public Perception on Artificial Intelligence-Driven Mental Health Interventions: Survey Research', *JMIR Formative Research* 8, no. 10 (2024): e64380. <https://doi.org/10.2196/64380>.

21 Ryan McBain, K. Robert Bozick, Melissa Diliberti et al. 'Use of Generative AI for Mental Health Advice Among US Adolescents and Young Adults', *JAMA Netw Open* 8, no. 11 (2025): e2542281. doi:10.1001/jamanetworkopen.2025.42281

users often rely on these systems for emotional support while simultaneously underestimating the security and privacy risks associated with data handling and confidentiality.<sup>22</sup> Taken together, this body of research highlights recurring tensions between perceived emotional usefulness and limited awareness of data-related risks.<sup>23</sup> Evaluations of empathy-oriented conversational agents such as Wysa show that users often experience the interaction as helpful and encouraging, indicating that such tools can support emotional expression and engagement. At the same time, these findings are typically situated within controlled or app-specific contexts.<sup>24</sup> Findings from a maternal mental health study of the Wysa app showed that higher-engagement users experienced greater reductions in self-reported depressive symptoms, and that their conversations often focused on expressing concerns, seeking support, reframing thoughts, and sharing victories and gratitude. These outcomes should be interpreted in relation to specific user groups and intervention designs, rather than generalised across mental health contexts.<sup>25</sup> However, qualitative interview data with adults living with anxiety suggest that, although people recognise the potential of conversational agents in mental health care, they still want human clinicians involved to provide empathy and a sense of therapeutic safety.<sup>26</sup> Recent experimental work on multi-modal AI systems in psychological support shows that such tools can assist users' emotional well-being by offering structured feedback, reflective prompts, and real-time supportive responses that help individuals process difficult experiences and regulate distress.<sup>27</sup> This is relevant to the present study, in which AI tools were described as supporting reflective engagement within aftercare contexts. Similarly, recent qualitative work suggests that generative AI chatbots can support reflection and emotional processing, yet users continue to view them mainly as helpful supplements rather than replacements for human therapy.<sup>28</sup> However, several respondents emphasised that an AI tool cannot replace the human factor—particularly the empathy, attunement, and relational depth provided by a therapist—a concern that aligns with recent conceptual work arguing that current AI systems lack the emotional understanding and ethical judgement needed for genuine therapeutic engagement.<sup>29</sup> Previous research suggests that the use of general-purpose LLM chatbots for emotional needs may be concentrated among a small subset of highly engaged users. Some studies further indicate that comparatively high-intensity usage across modalities has been associated with self-reported indicators of emotional dependence and problematic use.<sup>30</sup> Automated systems may misinterpret context or fail to provide adequate support in crises, reinforcing the need for human oversight. Recent findings similarly show that while LLM chatbots can assist with reflection and emotional

22 Zikun Liu, Wenxue Zou, and Cong Lin, 'Exploring the Influence of Privacy Concerns, AI Literacy, and Perceived Health Stigma on AI Chatbot Use in Healthcare: An Uncertainty Reduction Approach', *Patient Education and Counseling* 140 (2025): 109271. <https://doi.org/10.1016/j.pec.2025.109271>

23 Jabari Kwesi et al., 'Exploring User Security and Privacy Attitudes and Concerns Toward the Use of General-Purpose LLM Chatbots for Mental Health', in *Proceedings of the 34th USENIX Security Symposium* (Seattle, WA: USENIX Association, 2025), 6007–6024.

24 Becky Inkster, Shubhankar Sarda, and Vinod Subramanian, 'An Empathy-Driven, Conversational Artificial Intelligence Agent (Wysa) for Digital Mental Well-Being: Real-World Data Evaluation Mixed-Methods Study', *JMIR mHealth and uHealth* 6, no. 11 (2018): e12106, <https://doi.org/10.2196/12106>.

25 Becky Inkster, Madhura Kadaba, and Vinod Subramanian, 'Understanding the Impact of an AI-Enabled Conversational Agent Mobile App on Users' Mental Health and Wellbeing with a Self-Reported Maternal Event: A Mixed Method Real-World Data mHealth Study', *Frontiers in Global Women's Health* 4 (2023): 1084302, <https://doi.org/10.3389/fgwh.2023.1084302>.

26 Hyein S. Lee et al., 'Artificial Intelligence Conversational Agents in Mental Health: Patients See Potential, but Prefer Humans in the Loop', *Frontiers in Psychiatry* 15 (2024): 1505024, <https://doi.org/10.3389/fpsy.2024.1505024>

27 Ninda Lutfiani et al., 'Emotional Well-Being and Psychological Support in Infertility: A Multi-Modal AI Approach', *International Journal of Cyber and IT Service Management* 5, no. 1 (2025): 81–92, <https://doi.org/10.34306/ijcitsm.v5i1.188>.

28 Siddals, Torous, and Coxon, 'It Happened to Be the Perfect Thing', see note 4.

29 Zhihui Zhang and Jing Wang, 'Can AI Replace Psychotherapists? Exploring the Future of Mental Health Care', *Frontiers in Psychiatry* 15 (2024): 1444382, <https://doi.org/10.3389/fpsy.2024.1444382>.

30 Jason Phang et al., *Investigating Affective Use and Emotional Well-Being on ChatGPT* (OpenAI & MIT Media Lab Report, 2025).

expression, they remain insufficient when users seek empathic attunement or deeper relational support.<sup>31</sup>

These findings should be interpreted in light of several limitations. The sample size was small ( $n = 5$ ) and context-specific, consisting of clients engaged in addiction aftercare within the Czech Republic. The aim of the study was not to generate generalisable claims but to provide an in-depth understanding of how AI tools are experienced in a particular therapeutic context. The patterns identified here should therefore be understood as exploratory and situated rather than representative of broader populations. At the same time, the findings highlight the role of individual differences in shaping engagement with AI, particularly in relation to digital literacy and perceptions of risk. While most participants prioritised the immediate usefulness of AI tools, one participant expressed explicit concern regarding data privacy, which directly limited her use of AI. This suggests that awareness of data-related risks may function not only as a cognitive factor but as a practical barrier to engagement. Differences in how participants evaluated trust, usefulness, and safety therefore appear to be closely linked to their broader digital understanding and personal attitudes towards technology.

## Conclusions

This study highlights how clients in addiction aftercare settings interact with AI-based tools, particularly in moments of emotional need, cognitive disorganisation, or therapeutic reflection. The findings suggest that such tools are perceived as non-judgemental, accessible, and helpful in supporting self-expression, organising thoughts, and enhancing emotional regulation. While clients do not necessarily view AI as a replacement for therapy, they often use it to prepare for or process therapeutic encounters. This is consistent with broader evidence suggesting that AI can function as an auxiliary mental-health resource, especially for individuals with limited access to immediate human support. Given the exploratory character of this study and its small, context-specific sample, the following reflections should be understood as tentative considerations rather than prescriptive recommendations. The findings may encourage further exploration of how digital literacy discussions could be integrated into aftercare settings. They may also invite reflection on whether structured conversations about AI use during therapy sessions support or complicate therapeutic engagement. Concepts such as crisis-sensitive ‘red-flag’ approaches or clearer communication regarding data governance in hybrid human–AI contexts represent potential areas for future empirical and conceptual development, rather than immediate procedural implementation. Within a Christian ethical frame that foregrounds personal dignity and relational care, the findings tentatively support the view that AI may assist but should not displace the interpersonal essence of helping professions.

---

31 Inhwa Song, Sachin R. Pendse, Neha Kumar, and Munmun De Choudhury, ‘The Typing Cure: Experiences with Large Language Model Chatbots for Mental Health Support’, *Proceedings of the ACM on Human–Computer Interaction* 8 (2024): Article 14362, <https://doi.org/10.48550/arXiv.2401.14362>.

**Contact*****Kristýna Hellerová, MA***

University of South Bohemia in České Budějovice  
Faculty of Theology  
Department of Social Work and Caritas Studies  
Kněžská 8, 370 01 České Budějovice 1, Czech Republic  
hellek02@jcu.cz

***Assoc. Prof. Dr. David Urban***

University of South Bohemia in České Budějovice  
Faculty of Theology  
Department of Social Work and Caritas Studies  
Kněžská 8, 370 01 České Budějovice 1, Czech Republic  
durban@tf.jcu.cz

***Jana Hamhalterová, MA***

Prevent – Counselling Centre for Non-Substance Addictions  
Novohradská 1452/1  
370 01 České Budějovice, Czech Republic  
hamhalterova@prevent99.cz

## Payment Cards and Consumerism in the Age of AI: towards a Mediation Account

Ehsan Arzroomchilar, Daniel D. Novotný

DOI: 10.32725/cetv.2026.009

### Abstract

We sometimes assume that technologies simply do what they are designed to do. Technology, however, brings new opportunities and risks into the world that would not have been possible otherwise. It often leads to effects that are unintended and/or unforeseen and exceed our primary intentions. It shapes environment, society, and even our own self-understanding. In this paper, we offer an account of one such technology, namely payment cards (and other related payment technologies), which are an important step in the direction of cashless society and Internet of Things. While conveniently facilitating the process of payment, these cards have been shown to promote consumerism, impulsive spending, and, in some extreme cases, may even contribute to the development of a mental dysfunction known as 'Compulsive Buying Disorder'. In our applied philosophy essay, we employ the concept of technological mediation from the postphenomenological tradition, which highlights the role of artifacts themselves going beyond their merely instrumental value.

**Keywords:** Payment card, consumerism, Compulsive Buying Disorder, mental health, public health, mediation, Internet of Things, Postphenomenology, Don Ihde

### Introduction

Life in our age has taken a new shape. Technology is so ubiquitous that one may hardly find any aspect of life where technology is absent. Almost every dimension of our life is technological, so to speak. We live in human-made houses, eat human-made foods, communicate with others through human-made devices and so forth. We barely encounter the natural world directly. This is true of simple technologies, such as glasses and bicycles and even more so of smart ones with sophisticated electronics gradually integrated into vast interacting AI-powered Internet of Things. This human-made world is not neutral. We have formed it but it in turn forms us in terms of exerting influence on our habits, behaviours, perceptions, decisions, and, more broadly, our relationship with the environment. Although scholars have yet to reach a consensus on how best to study the impacts of technology or how to conceptualise its role, there is widespread agreement that technology often generate unintended and unforeseen consequences.

Philosophers of various backgrounds and traditions have strived to understand the role of

technology in a systematic way. While many philosophers try to provide a general description of technology and ignore the differences between various technologies, one of the traditions, so-called postphenomenology, emphasise the need to avoid sweeping generalisations about technology. Instead, it seeks out to bring those specific facets of particular artifacts into philosophical attention.<sup>1</sup> Postphenomenology furthermore provides a framework within which one may study any artifact in a specific and distinct way. Every particular artefact *mediates* our experience and human-environment relationship in its own specific way and thus calls for an independent study. In this paper we focus on one such artefact, namely payment cards and, more broadly, other novel tools of payment.<sup>2</sup> We are specifically addressing this artefact as a plausible contributing factor in the development of consumerism, overspending, sometimes escalating into compulsive buying behaviours that may manifest in some extreme cases as a psychiatric condition, called Compulsive Buying Disorder (CBD).<sup>3</sup> The topic is of interest in its own right but possibly even more in times of an increasing call for a cashless society,<sup>4</sup> powered by AI and interconnected through the Internet of Things (IoT).

It goes without saying that there are many benefits of payment cards such as convenience, security, impact on public health<sup>5</sup> and economic growth.<sup>6</sup> However, as we have learned already from Plato in *Phaedros*, who warned of the negative impact of inventing the technology of writing on memory and philosophical enquiry, with every new technology there are not just positive but also negative consequences. As applied philosophers, we should attempt to understand both and consider ways of maximising the good and minimising the bad ones. This is even more true when it comes to novel, disruptive technologies, such as recently computers, robots, internet, autonomous vehicles, dating apps, and so on. While we appreciate *positive* ambitions of some companies to offer the possibility of ‘ordering and paying by thought and delivering by teleportation’, we would also like to draw attention to likely *negative* aspects of certain indispensable components of this vision, in particular payment cards and other contemporary forms of cashless payment.<sup>7</sup>

- 
- 1 In this paper, we use the terms ‘artefacts’ and ‘technology’ interchangeably. By these terms, we refer broadly to entities brought into existence through human effort, as opposed to those that arise naturally or exist as brute facts of nature. Some postphenomenologists, such as Peter-Paul Verbeek, resist drawing a strict distinction between humans and artefacts. For critical evaluation, see Ehsan Arzroomchilar and Daniel D. Novotný, ‘Verbeek on the Moral Agency of Artifacts’, *Organon F* 25, no. 4 (2018): 517–538.
  - 2 We do not address here the distinction between debit and credit cards, as both are typically designed to function in ways that are largely indistinguishable for most end-users; except, perhaps, that credit cards may offer even greater possibilities for overspending.
  - 3 We are aware that there is an ongoing controversy in psychiatry and philosophy of psychiatry concerning the definition and even the very existence of some personality disorders, such as CBD. See, e.g., Peter Zachar and Robert F. Krueger, ‘Personality Disorder and Validity: A History of Controversy’, in *The Oxford Handbook of Philosophy and Psychiatry*, ed. K. W. M. Fulford et al. (Oxford: Oxford University Press, 2013), 889–910. A comprehensive discussion of the distinctions between consumerism, excessive-shopping traits, compulsive buying, behavioural addictions, CBD, and related concepts would lead us into a broad and contentious interdisciplinary debate, one that exceeds the scope of this paper. Our aim here is more modest: to address payment tools cash/card with respect to consumerism and its related phenomena, ranging from subclinical patterns observable in the general population to their more severe manifestations, *including* CBD. See, e.g., Donald W. Black ‘Compulsive Buying Disorder: Definition, Assessment, Epidemiology and Clinical Management’, *CNS Drugs* 15, no. 1 (2001): 17–27; Donald W. Black, ‘A Review of Compulsive Buying Disorder’, *World Psychiatry* 6, no. 1 (2007): 14–18. For more, see also below the section 3.
  - 4 Some countries and territories come to be close to completely cashless already, esp. Scandinavian and East Asian. For economic evaluation, see, e.g., Yukinobu Kitamura, *Quest for Good Money: Past, Present and Future* (Singapore: Springer Nature, 2022), 125–151.
  - 5 Paper money and coins are known vectors of various pathogens. Fomites contribute not only to the spread of SARS-CoV-2, where this seems to be a rather minor way of transmission route during the recent pandemic, but also to the spread of numerous other viruses, such as influenza viruses, noroviruses, rhinoviruses, rotaviruses, and hepatitis A virus, as well as bacteria, such as *Staphylococcus aureus*, *Escherichia coli*, and *Salmonella*. See Emmanouil Angelakis et al., ‘Paper Money and Coins as Potential Vectors of Transmissible Disease’, *Future Microbiology* 9, no. 2 (2014): 249–261.
  - 6 For a study on economic growth, see, e.g., Mark Zandl, Virendra Singh, and Justin Irving, ‘The Impact of Electronic Payments on Economic Growth’ (Moody’s Analytics, 2013), <https://usa.visa.com/dam/VCOM/download/corporate/media/moodys-economy-white-paper-feb-2013.pdf>. One may also investigate the positive and negative impact on natural environment; these are, however, difficult to measure and remain understudied.
  - 7 ‘Ordering by Thought and Delivering by Teleport’ is a motto of the Czech e-commerce company Alza.cz. Even easier ways to pay would

Regarding the negative aspects, we do not address all potential concerns surrounding payment cards; instead, we limit our focus to issues of consumerism, compulsive buying, and, more speculatively, CBD. There are serious issues of privacy and security that have their technical, economic, and also ethical aspects but we set them aside here. We only aim to provide an account of the phenomenon of consumerism and compulsive buying associated with card payment method. We also suggest a direction in which our account may help to find ways to better cope with excessive consumerism (and perhaps CBD as well).

We call our account a ‘mediation account’ because it is inspired by postphenomenological tradition for which the concept of mediation is central.<sup>8</sup> Our core claim is that mediation of payment card differs from cash primarily by its *material* manifestation which makes cards as if *transparent* in themselves allows them to withdraw from the user’s awareness. This transforms them into a sort of veil that hides the value being spent on goods and might bring about irresponsible and impulsive behaviour. Perhaps somewhat paradoxically, cash, thanks to its *physical* properties, draws attention to itself and hence also to the value it represents; in this way it invites to a different, a more responsible and less impulsive behaviour. Put differently, the inherent characteristics of cash, on the one hand, and payment cards, on the other, cultivate distinct ways in which consumers relate to their environment, namely, to the products they purchase. This, in turn, gives rise to different patterns of consumption. While payment cards and other ‘pure’ means of value transactions have many advantages, we show that ‘material’ aspects of payment systems need to be preserved in some way and to some degree as well.<sup>9</sup>

We proceed as follows. In sections 2 and 3 we briefly introduce payment cards and compulsive buying (in its more extreme form of CBD) to provide a context for our mediation account. In section 4 we will sketch our general framework inspired by the postphenomenological tradition by which we may come to an understanding of the phenomenon of payments and compulsive buying. In sections 5 and 6 the most important step will be taken, and we will bring philosophical grounds of two competing methods of payments to the fore, namely cash versus card payment. Here we will provide an explanation of how payment cards may promote a consumerist and compulsive behaviour in buyers. In the last section, we will discuss how we may come to a balance when it comes to incorporating advantages of both payment methods while minimising their disadvantages.

As already noted, this paper is primarily an essay in applied philosophy. Our aim is to outline a plausible research programme that builds on existing empirical findings without undertaking that empirical work ourselves and/or systematically comparing it to potentially competing explanations

---

be implanted nanochips that would enable payments. There is a growing demand for implant nanochips in some countries such as Sweden and perhaps soon they may be used for payment too. See, e.g., Lauren Chadwick and Ric Wasserman, ‘Will Microchip Implants Be the Next Big Thing in Europe?’ *Euronews*, May 12, 2020, <https://www.euronews.com/2020/05/12/will-microchip-implants-be-the-next-big-thing-in-europe>.

8 We could also call it a ‘postphenomenological account’, but we are not committed to some of the claims made by postphenomenologists, such as pragmatism and what they call anti-essentialism. Our understanding of essentialism differs from that of postphenomenologists, but we cannot deal adequately with this issue here. See, e.g., Daniel D. Novotný and Lukáš Novák, eds., *Neo-Aristotelian Perspectives in Metaphysics* (New York: Routledge, 2014). At any rate, we consider some of the assumptions of postphenomenologists as neutral with respect to our current project. Also, we are aware that there are other accounts of mediation besides the phenomenological one. For more on mediation and postphenomenology see, e.g., Don Ihde, *Technology and the Lifeworld: From Garden to Earth*. Bloomington: Indiana University Press, 1990; Robert Rosenberger and Peter-Paul Verbeek, eds., *Postphenomenological Investigations: Essays on Human–Technology Relations* (Lanham, MD: Lexington Books, 2015); Jochem Zwier, Vincent Blok, and Pieter Lemmens, ‘Phenomenology and the Empirical Turn: A Phenomenological Analysis of Postphenomenology’, *Philosophy & Technology* 29, no. 4 (2016): 313–333.

9 One of the anonymous referees noted that the contrast between cash and payment cards is not strictly binary, since payment cards also possess physical characteristics, and cash itself may, under certain conditions, become somewhat transparent and similarly conducive to consumerist behaviour. We agree with this observation and are pleased to make the point explicit. The contrast, as we intend it, is a matter of degree and must be understood within the broader context of socio-technical networks and environments. It remains real, nevertheless.

in various disciplines such as social psychology, behavioural economics, neuroeconomics, etc.<sup>10</sup> Undertaking such work would require a broader research team, which we leave for future projects. We now turn to a brief general account of the phenomena of payment cards (section 2) and of consumerism and CBD (section 3).

## Payment Cards

Payment cards represent a noteworthy innovation in the history of money.<sup>11</sup> They too, serve the four functions famously identified by William Jevons in *Money and the Mechanism of Exchange* (1875): as a medium of exchange, a common measure, a standard, and a store of value. They appear to many users, however, as a convenient and attractive alternative to *cash*, i.e., banknotes and coins, since they are smaller, easier to carry, and usually more secure.

The modern history of cashless payments has been traced to Northern America in 1800s. It is reported that ‘during westward expansion, merchants would use credit coins and charge plates to extend credit to local farmers and ranchers, allowing them to forgo paying their bills until they harvested their crops or sold their cattle.’<sup>12</sup> At the beginning of the twentieth century some stores and companies began to issue ‘store cards.’ Gradually, countless contributions by inventors and companies throughout the twentieth and twenty-first century led to the development of the current system of payment cards. Here are some of the milestones<sup>13</sup>:

- 1946 John C. Biggins, of Flatbush National Bank of Brooklyn, NY, created a system called *Charg-It*, which is considered to be the first payment card.
- 1950 Diners’ Club card has is able to show credit to the participating stores.
- 1959 American Express introduces a plastic card.
- 1972 Lloyds Bank introduces information-encoding magnetic strip and the personal identification number (PIN) for security.
- 1973 Atalla Technovation develops hardware security module (HSM) with microchips,

10 In fact, we do not even attempt to survey all the major approaches in applied philosophy. Among the perspectives that appear especially promising to us are virtue-ethical frameworks and contemporary accounts of well-being. Within these approaches we could raise questions such as: What kinds of technomoral virtues are required for flourishing in a predominantly cashless society? Are these virtues distinct from those cultivated in societies that relying on other forms of payment? And how might prevailing conceptions of well-being shift as individuals and communities transition from cash to digital or cashless environments? Here are some examples of virtue-ethical approaches applied to other emerging technologies. Autonomous vehicles: Soraj Hongladarom and Daniel D. Novotný, ‘Autonomous Vehicles in Drivers’ School: A Non-Western Perspective’, in *Autonomous Vehicle Ethics: The Trolley Problem and Beyond*, ed. Ryan Jenkins, David Černý, and Tomáš Hříbek (Oxford: Oxford University Press, 2022), 99–113; Love- and Sexrobots: Cécilia Andrée Monique Lombard and Daniel D. Novotný, ‘Aristotle and Sartre on Eros and Love-Robots’, *Open Philosophy* 8, no. 1 (2025), <https://doi.org/10.1515/opphil-2025-0065>. For comprehensive virtue-ethical account regarding technology in general, and AI in particular, the best way to start is with Shannon Vallor’s books *Technology and Virtues: A Philosophical Guide to a Future Worth Wanting* (New York: Oxford University Press, 2016) and : *AI Mirror: How to Reclaim Our Humanity in an Age of Machine Thinking* (New York: Oxford University Press, 2024). Vallor’s work offers valuable resources for thinking about the cultivation of moral character in technologically saturated environments. We see our mediation account as complementary, not competing to virtue ethics.

11 For a more general introduction to various metaphysical, epistemological, and ethical issues concerning money, see Boudewijn de Bruin et al., ‘Philosophy of Money and Finance’, in *The Stanford Encyclopedia of Philosophy* (Winter 2018 Edition), ed. Edward N. Zalta, <https://plato.stanford.edu/archives/win2018/entries/money-finance/>.

12 Jan MacDonald and Taylor Tompkins, ‘The History of Credit Cards’, *CreditCards.com*. Accessed July 14<sup>th</sup>, 2020. <https://www.creditcards.com/credit-card-news/history-of-credit-cards/>; See also Merrill Fabry, ‘Now You Know: What Was the First Credit Card?’ *Time*, October 19<sup>th</sup>, 2016, <https://time.com/4512375/first-credit-card/>.

13 For more on the history, see Lewis Mandell, *The Credit Card Industry: A History* (Boston: Twayne Publishers, 1990); David S. Evans and Richard Schmalensee, *Paying with Plastic: The Digital Revolution in Buying and Borrowing* (Cambridge, MA: MIT Press, 1999); and Bernardo Bátiz-Lazo and Leonidas Efthymiou, *The Book of Payments: Historical and Contemporary Views on the Cashless Society* (London: Palgrave Macmillan, 2016). See also the Wikipedia entry ‘payment card’ ([https://en.wikipedia.org/wiki/Payment\\_card](https://en.wikipedia.org/wiki/Payment_card)) for useful links and bits and pieces of history and technical details.

- used for secure financial transactions e.g. at ATMs.
- 1990 EMV (Europay, Mastercard, and Visa) chips technology created.
- 2008 Apple creates the virtual wallet that makes mobile devices to function as payment cards.

There are other security and insurance features developed to dispel the subjective mistrust of potential users and to objectively decrease the probability of misuse. Here, however, we are not concerned with the detailed history of technical and commercial developments but rather with an impact on human experience once cashless technology becomes widespread. As we have mentioned, the use of payment cards is increasing, with calls for entirely cashless societies. Although only few countries consider this step the trend is clear and payments cards will not go away any time soon.<sup>14</sup> On the contrary, cashless payments, whether by plastic cards or through increasingly advanced IoT technologies, will continue to expand and evolve.<sup>15</sup>

## Consumerism and Compulsive Buying

Shopping is an aspect of consumerist behaviour that may in some extreme cases lead to compulsive buying and even compulsive buying disorder. Today changes in the lifestyle have increased the complexity of the consumption patterns which results in an environment in which there are plenty of causes promoting compulsive purchasing. When the activity of shopping becomes a strong irresistible impulse with adverse consequences for the overall well-being, we speak of oniomania, from Greek ὄνιος (*ónios*) ‘for sale’ and μανία (*mania*) for ‘insanity’.<sup>16</sup> It is a personality trait that in plain words indicates that someone experiences an impulsive feeling to excessive shopping and overspending money. Currently, this trait is in its extreme form commonly conceptualised as a personality disorder. In ICD-10 (F63.8), it is coded as an ‘impulse control disorder, not otherwise classified’.<sup>17</sup>

There is no consensus on the precise definition of the disorder.<sup>18</sup> Some attempts at definitions or rather characterisations include:

- ‘an irresistible–uncontrollable urge, resulting in excessive, expensive and time-consuming retail activity [that is] typically prompted by negative affectivity’ and results in ‘gross social, per-

14 For a future of money, see, e.g., David Wolman, *The End of Money: Counterfeiters, Preachers, Techies, Dreamers—and the Coming Cashless Society* (Boston: Da Capo Press, 2012).

15 ‘The availability of Internet of Things (IoT) devices and data is driving development of advanced payments services. More than 30 billion IoT devices are connected to the internet today, and that number is expected to grow to 44 billion by the end of 2021. The advent of 5G and its ability to connect billions of IoT devices more seamlessly will drive consumers to become hyper-connected and digital-first, which in turn will lead to the emergence of innovative new products and services’ Mastercard, ‘How IoT Will Shape the Future of Payments’ (Global Open Network Whitepaper, 2021), <https://www.mastercard.com/news/media/wddjfrhn/how-iot-will-shape-the-future-of-payments.pdf>.

16 The German Jewish physician Max Nordau (1849–1923) traces the term to the French psychiatrist Valentin Magnan (1835–1916): ‘Magnan declares it to be a stigma of degeneration, and has invented for it the name ‘oniomania,’ or ‘buying craze.’ This is not to be confounded with the desire for buying, which possesses those who are in the first stage of general paralysis. The purchases of these persons are due to their delusion as to their own greatness. They lay in great supplies because they fancy themselves millionaires. The oniomaniac, on the contrary, neither buys enormous quantities of one and the same thing, nor is the price a matter of indifference to him as with the paralytic. He is simply unable to pass by any lumber without feeling an impulse to acquire it.’ Max Nordau, *Degeneration*, trans. Howard Fertig (New York: Fertig, 1968, first published 1896).

17 Black, ‘Compulsive Buying Disorder’, 17–27. Some authors argue that it is a variety of dependence disorder Bernhard Croissant and Daniela Croissant, ‘Kaufsucht – Aktuelle Überlegungen zur Klassifikation und Therapie’, *Der Nervenarzt* 78, no. 5 (2007): 575–579.

18 See, e.g., Richard J. Harnish and Kenneth R. Bridges, ‘Compulsive Buying: The Role of Irrational Beliefs, Materialism, and Narcissism’, *Journal of Rational-Emotive and Cognitive-Behavior Therapy* 33 (2015): 1–16.

sonal and/or financial difficulties<sup>19</sup>

- ‘a behavioural addiction characterised by irresistible, intrusive, and senseless preoccupations to buy items, coinciding with uncontrolled buying episodes that lead to significant social or economic problems<sup>20</sup>
- ‘a condition when consumers have the tendency to conduct repetitive buying excessively and display a shortfall of impulse control over buying.’<sup>21</sup>

Systematic medical preoccupations with this disorder are traced to Emil Kraepelin’s textbook (1924).<sup>22</sup> There was little progress, however, in the understanding this disorder as it stood at the fringes of the medical research until about thirty years ago.<sup>23</sup>

It is estimated that around 5% of the population in the developed countries suffer from CBD to the differing degrees.<sup>24</sup> Research into this phenomenon has explored the factors which may cause or be associated with compulsive buying behaviour. For instance, Achziger et al. show that lower levels of self-control are associated with higher levels of compulsive buying.<sup>25</sup> Another research shows that hedonic motives are related to compulsive buying.<sup>26</sup> A research also shows an association between self-congruence as the driver of compulsive buying.<sup>27</sup> Brand attachment too, is considered to provide firms with positive consequences.<sup>28</sup> The list goes on to include many other items. It is thought that CBD is associated with high levels of anxiety and stress,<sup>29</sup> high levels of narcissistic values,<sup>30</sup> rigidity aspects of irrational beliefs,<sup>31</sup> high levels of materialistic values and

- 
- 19 Stephen Kellett and J. Veronica Bolton, ‘Compulsive Buying: A Cognitive-Behavioural Model’, *Clinical Psychology and Psychotherapy* 16, no. 2 (2009): 83–99.
- 20 Gemma Mestre-Bach, Trevor Steward, Susana Jiménez-Murcia, and Fernando Fernández-Aranda, ‘Differences and Similarities Between Compulsive Buying and Other Addictive Behaviors’, *Current Addiction Reports* 4 (2017): 228–236.
- 21 Arnold Japutra, Yuksel Ekinci, and Lyndon Simkin, ‘Tie the Knot: Building Stronger Consumers’ Attachment toward a Brand’, *Journal of Strategic Marketing* 26, no. 3 (2018): 223–40.
- 22 Kraepelin, Emil, *Psychiatrie. Ein Lehrbuch für Studierende und Ärzte* (Leipzig: Barth, 1924).
- 23 Black, ‘Compulsive Buying Disorder’, 17–27.
- 24 Aniko Maraz, Mark D. Griffiths, and Zsolt Demetrovics, ‘The Prevalence of Compulsive Buying: A Meta-Analysis’, *Addiction* 111, no. 3 (2016): 408–419. Although the term ‘compulsive buying disorder’ is no longer included in the last version of DSM, namely DSM-5 (American Psychiatric Association, 2013), it does not imply that CBD is not considered ‘disorder’ anymore. For one thing, even within the DSM-5, CBD seems to be recognised, in a tacit way though, where the domain of compulsive ‘buying’ seems to be extended into ‘hoarding’ disorder. Hoarding disorder, as the book indicates is a new subject which is treated under the label ‘Obsessive-Compulsive and Related Disorders’. See, e.g., the end of the publication under the heading ‘Highlights of Changes From DSM-4 to DSM-5’. The inclusion of CBD into the broader category of ‘hoarding disorder’ is discernible, more explicitly, where we read (Hoarding Disorder, 300.3 (F42)): ‘Approximately 80%-90% of individuals with hoarding disorder display excessive acquisition. The most frequent form of acquisition is excessive buying, followed by acquisition of free items’. For another evidence of CBD to be taken as a disorder, one may notice the huge bulk of work in the psychology literature, even after release of DSM-5, where the debate of CBD is still going on.
- 25 Anja Achziger et al., ‘Debt Out of Control: The Links Between Self-Control, Compulsive Buying, and Real Debts’, *Journal of Economic Psychology* 49 (2015): 141–149.
- 26 Monika Kukar-Kinney, Angeline Close Scheinbaum, and Tobias Schaefer, ‘Compulsive Buying in Online Daily Deal Settings: An Investigation of Motivations and Contextual Elements’, *Journal of Business Research* 69, no. 2 (2016): 691–699.
- 27 Arnold Japutra, Yuksel Ekinci, and Lyndon Simkin, ‘Self-congruence, brand attachment and compulsive buying’, *Journal of Business Research* 99 (2019): 456–463.
- 28 Matthew Thomson, Deborah J. MacInnis, and C. Whan Park, ‘The Ties That Bind: Measuring the Strength of Consumers’ Emotional Attachments to Brands’, *Journal of Consumer Psychology* 15, no. 1 (2005): 77–91; Hans Ruediger Kaufmann, Dan Alex Petrovici, Cid Gonçalves Filho, Adriano Ayres, ‘Identifying moderators of brand attachment for driving customer purchase intention of original vs counterfeit of luxury brands’, *Journal of Business Research* 69, 12 (2016): 5735–5747; Japutra et al. ‘Tie the knot’, 223–240.
- 29 Black, ‘Compulsive Buying Disorder’, 17–27; Nancy M. Ridgway, Monika Kukar-Kinney, and Kent B. Monroe. ‘An Expanded Conceptualization and a New Measure of Compulsive Buying’, *Journal of Consumer Research* 35 (2008): 622–639; Richard J. Harnish, Kenneth R. Bridges, Joshua T. Gump, and Amanda E. Carson, ‘The Maladaptive Pursuit of Consumption: The Impact of Materialism, Pain of Paying, Social Anxiety, Social Support, and Loneliness on Compulsive Buying’, *International Journal of Mental Health and Addiction* 17 (2019): 1401–1416.
- 30 Harnish and Bridges, ‘Compulsive Buying’, 1–16.
- 31 Harnish and Bridges, ‘Compulsive Buying’, 1–16.

materialism<sup>32</sup> and high levels of substance use and eating disorders.<sup>33</sup> Self-attitudinal aspects of body image too, have been shown to be associated with compulsive buying.<sup>34</sup> Hui-Yi Lo and Nigel Harvey conducted research during which they realised that the use of payment cards rather than cash while shopping may contribute to the phenomenon of overspending, consumerism, and CBD.<sup>35</sup> In general, individuals with compulsive buying tendencies consistently demonstrate low levels of self-esteem and well-being.<sup>36</sup>

With payment cards and compulsive buying now introduced, we can turn to the theoretical framework of mediation.

## Mediating Role of Technology

Postphenomenology is primarily concerned with the study of *relations* between human beings and the world as mediated by technology.<sup>37</sup> As one of its main originators, Don Ihde (1934–2024) argues, the human–world relation is, in most cases, in fact a *human–technology–world* relation.<sup>38</sup> Crucially, technology is far from neutral; it functions as a mediating force that fundamentally restructures how human beings relate to their environment.<sup>39</sup>

Technology mediates perception. For example, a multisensory, embodied encounter between practitioner and client may be transformed into a predominantly unisensory, auditory interaction when conducted via telephone. What is given in perception, i.e., tone, gesture, bodily presence, spatial atmosphere, is altered through technological mediation.

32 Helga Dittmar, 'Compulsive Buying—A Growing Concern? An Examination of Gender, Age, and Endorsement of Materialistic Values as Predictors', *British Journal of Psychology* 96 (2005): 467–491; Harnish and Bridges, 'Compulsive Buying', 1–16.

33 Black, 'Compulsive Buying Disorder', 17–27; Ridgway et al., 'An Expanded Conceptualization', 622–639; Richard J. Harnish, Joshua T. Gump, K. Robert Bridges, Frederick J. Slack, and Karen M. Rottschaefer, 'Compulsive Buying: The Impact of Attitudes Toward Body Image, Eating Disorders, and Physical Appearance Investment', *Psychological Reports* 122, no. 5 (2019): 1632–1650.

34 Harnish et. al., 'Compulsive Buying: The Impact of Attitudes', 1632–1650.

35 Hui-Yi Lo and Nigel Harvey, 'Shopping without pain: Compulsive buying and the effects of credit card availability in Europe and the far east', *Journal of Economic Psychology* 32 (2011): 79–92.

36 Alishia D. Williams, 'Quality of Life and Psychiatric Work Impairment in Compulsive Buying: Increased Symptom Severity as a Function of Acquisition Behaviors', *Comprehensive Psychiatry* 53, no. 6 (2012): 822–828; Dittmar, Helga, Richard Bond, Mark Hurst, and Tim Kasser, 'The Relationship Between Materialism and Personal Well-Being: A Meta-Analysis', *Journal of Personality and Social Psychology* 107 (2014): 879–924; Harnish et al., 'Maladaptive Pursuit of Consumption', 1401–1416.

37 Concerning the notion of mediation: in both philosophical and non-philosophical literature, the term is used in a variety of ways. In its broadest sense, saying that A and B are mediated by C means that, in order to move from A to B (or vice versa), one must pass through the medium C, typically a non-neutral element that affects both A and B as well as the very process connecting them. Different disciplines employ the term in more specialised senses. Perhaps the most familiar usage is found in conflict resolution within legal, political, diplomatic, and military contexts. The term also appears across numerous social sciences, including anthropology, sociology, economics, political science, and psychology. In our paper, however, we limit our focus to the meaning developed within the postphenomenological tradition in philosophy. Another important tradition using the concept of mediation is Actor–Network Theory (ANT) within Science and Technology Studies (STS), associated especially with the work of Bruno Latour (1947–2022) and Madeleine Akrich. For representative discussion, see Bruno Latour, 'Where Are the Missing Masses? The Sociology of a Few Mundane Artifacts', in *Shaping Technology/Building Society: Studies in Sociotechnical Change*, ed. Wiebe E. Bijker and John Law (Cambridge, MA: MIT Press, 1992), 225–58; Madeleine Akrich, 'The De-Description of Technical Objects', in *Shaping Technology / Building Society: Studies in Sociotechnical Change*, edited by Wiebe E. Bijker and John Law, 205–224. Cambridge, MA: MIT Press.

38 Ihde, *Technology and the Lifeworld*; Don Ihde, *Expanding Hermeneutics: Visualism in Science* (Evanston, IL: Northwestern University Press, 1998); Don Ihde, *Postphenomenology and Technoscience: The Peking University Lectures* (Albany: SUNY Press, 2009).

39 Hence there is an affinity between postphenomenology and a longstanding tradition within the helping professions that understands human affairs, including psychological dimensions, in relation to the environment. This perspective contrasts with more traditional approaches in which the human condition is explained predominantly in individualistic terms, as is often the case within the psychodynamic tradition, see, e.g., David Howe and Darren Hill. *A Brief Introduction to Social Work Theory* (London: Bloomsbury Academic, 2024). From this standpoint, the idea that 'people can only be fully understood in relationship to their environment' effectively 'defines social work' (Howe and Hill, *A Brief Introduction*, 130). The term 'environment' encompasses not only social relationships, but also material contexts, including human-made artefacts, see Ehsan Arzroomchilar 'Why Disability Is Technologically Mediated?', *Human Studies* 47 (2024): 713–726. To offer a simple example, an elderly person who lacks the necessary skills to use smartphones may experience exclusion in a society where basic administrative tasks must be carried out through mobile applications. In this sense, artefacts are not merely external tools but active contributors to the shaping of the human condition.

Technology also mediates behaviour.<sup>40</sup> Conducting a session over the phone affords and constrains different forms of engagement than those characteristic of a face-to-face therapeutic encounter. Patterns of communication, attentiveness, and responsiveness are reshaped accordingly. Moreover, technology mediates habits, values, and other variables that contribute to the formation of character, as will be discussed in greater detail in the next section. The mediating role of technology should therefore not be confused with that of a mere intermediary. Mediation implies an *active* and transformative force: technology participates in the reconfiguration of the person–environment relationship itself.

As said, relations are of central importance in this framework. Ihde distinguishes four types of relations that humans can hold with technology.<sup>41</sup> Although all four will be introduced below, the first two will be most relevant for our discussion in the next section.

First, by an *embodiment relation*, Ihde refers to a relation in which a person becomes so merged with a tool that the latter withdraws from focal awareness. A pair of eyeglasses is the paradigmatic example: once worn, they no longer occupy the centre of attention (except when they become dirty or damaged). One looks *through* them at the world rather than *at* them. A key notion here is *transparency*. The more transparent a tool becomes over time, as one grows accustomed to it, the more fully embodied it is, and the less it is explicitly noticed. Consider someone who begins using a cane. At first, the cane is fully present in her awareness. Gradually, however, it becomes incorporated into her sensorimotor system and recedes from attention, fading into the background of experience. Schematically, the *embodiment relation* can be expressed as:

*Embodiment relation:* (I – technology) → world

Second, by a *hermeneutic relation*, Ihde means a relation in which technology requires interpretation; it presents the world through a form of reading or decoding. There is a mode of ‘looking at’ or ‘listening to’ involved. When a physician examines an ultrasound image or when someone reads a thermometer to determine the room temperature, they engage in a hermeneutic relation. As in the *embodiment relation*, technology mediates the human–world relation; however, unlike embodiment, the tool does not withdraw from awareness. The world is not perceived *through* the artefact but rather *by means of* it. Ihde schematises this relation as:

*Hermeneutic relation:* I → (technology – world)

Third, in an *alterity relation*, the primary relation is not to the world through technology but to the technology itself, which appears as a quasi-other. For example, when purchasing a ticket from a ticket machine, an interaction unfolds: the machine prompts, responds, and guides the user. More sophisticated technologies, such as robots or interactive software, similarly command the user’s attention as entities in their own right. The schema is:

*Alterity relation:* I → technology (– world)

Finally, Ihde describes a *background relation*. In this case, we neither relate to the world through

40 Verbeek, Peter-Paul, *What Things Do: Philosophical Reflections on Technology, Agency, and Design*. University Park, PA: Penn State University Press, 2005; *Moralizing Technology: Understanding and Designing the Morality of Things*. Chicago, IL: University of Chicago Press, 2011.

41 Ihde, *Technology and the Lifeworld*; Ihde, *Expanding Hermeneutics: Visualism in Science*.

the tool nor attend to the tool itself; rather, the technology forms the background condition of experience. A central heating system operating while one is having dinner is a typical example. It shapes the experiential environment without becoming an object of attention. Schematically:

*Background relation: I (– technology – world)*

Importantly, in all types of relationships, individuals' perceptual as well as behavioural experiences undergo substantial reconfiguration compared to experiences in the absence of technology. In this light, despite the diverse roles technology may play, it significantly contributes to the restructuring of the human–world relationship.

Another relevant concept for understanding different methods of payment is that of *sedimentation*, a term drawn from classical phenomenology.<sup>42</sup> Sedimentation refers to the process by which relations with technology become habitual: not only as habits of thought but also as embodied, perceptual dispositions. A highly sedimented relation is one deeply ingrained through long-developed bodily and perceptual routines.<sup>43</sup> When someone wears eyeglasses for the first time, she cannot yet sustain a full embodiment relation, since the glasses are not sufficiently transparent to withdraw from awareness. Over time, however, as familiarity increases, the relation becomes sedimented and the glasses recede from attention.

With this conceptual framework in place, we can now turn to its application to consumerism and the related phenomena such as CBD, and the use of payment cards.

## The Mediation of Cash vs. Payment Cards

As noted earlier, a growing body of literature suggests that payment cards may incline users toward overspending.<sup>44</sup> In this section, drawing on the framework of postphenomenology, we seek to provide a philosophical account of these empirical findings. As discussed above, postphenomenology maintains that our relationship with the world is most often mediated by technology. Through such mediation, technology can reconfigure how the world appears to us. By amplifying certain possibilities for action while discouraging others, it reshapes the way we are present in and engage with our environment. It may also mediate our dispositions, habits, choices, and values. Postphenomenology thus offers conceptual tools for bringing technological mediation into focus, i.e., for analysing specific technologies and exploring their distinctive mediating roles. What, then, does postphenomenology contribute to our understanding of different payment methods? How might it differentiate the mediating effects of cash from those of payment cards?

Before turning to these specificities, it is worth briefly reflecting on money more generally and the way it mediates our lives. Money shapes both perception and behaviour. It can transform the world from a collection of *things* into a collection of *goods*. From snacks in a café and clothing

42 See also: Robert Rosenberger, 'Embodied technology and the dangers of using the phone while driving', *Phenomenology and the Cognitive Sciences* 11, no. 1 (2012): 79–94; Robert Rosenberger, 'Multistability and the agency of mundane artifacts: From speed bumps to subway benches', *Human Studies* 37 (2014): 369–392; Robert Rosenberger, 'The Phenomenological Case for Stricter Regulation of Cell Phones and Driving', *Techné: Research in Philosophy & Technology* 18(1/2): 20–47.

43 Robert Rosenberger and Peter-Paul Verbeek, *Postphenomenological Investigations*, 25.

44 See, e.g., Martina Eschelbach, 'Pay cash, buy less trash? – Evidence from German payment diary data', *International Cash Conference 2017 - War on Cash: Is there a Future for Cash?* 25 - 27 April 2017, Island of Mainau, Germany, Deutsche Bundesbank, Frankfurt a. M., <https://www.econstor.eu/handle/10419/162908>; Elif Incekara-Hafalir and George F. Loewenstein, 'The Impact of Credit Cards on Spending: A Field Experiment' (April 13, 2009). <https://ssrn.com/abstract=1378502>; David B. Humphrey, 'Replacement of cash by cards in US consumer payments', *Journal of Economics and Business* 56 (2004): 211–225; Drazen Prelec and Duncan Simester, 'Always leave home without it: A further investigation of the credit-card effect on willingness to pay', *Marketing Letters* 12 (2001): 5–12

in a shop to land and property, objects increasingly appear as purchasable once money has been earned or made available. In this respect, various methods of payment, such as coins, banknotes, cards, cryptocurrencies, or check books, share a common function: they render the surrounding world as a field of commodities available for acquisition. Even human actions may come to appear as tradable *services* in the wake of monetary exchange. Money thus tends to transform the world into a vast marketplace; its display windows filled with *goods* and *services* designed to satisfy human desires.

In this sense, money may be understood as an objective measure that assigns numerical value to things, enabling them to be compared, ranked, and exchanged. Moreover, it is not only tangible objects or actions that become commodified. Consider an artwork, for instance, a painting. It, too, appears as a tradable good. What is exchanged is not merely the canvas or the labour invested in it, but also its aesthetic qualities or cultural significance. Money, therefore, has the capacity to translate even abstract values such as beauty or cultural identity into numerical terms.<sup>45</sup>

Now, when it comes to specific methods of payment, each method plays a different role depending on its particular characteristics. Therefore, payment practices must be studied in their specificity. Of primary importance is the material configuration of cash, coins and notes, on the one hand, and payment cards on the other, as these configurations may solicit different forms of behaviour. Let us first consider cash. Coins and notes, above all, carry inscribed numerals. Numerals matter; they are signs that denote something beyond themselves and therefore invite interpretation and reaction. For the possessor of money, numerals convey meaning. The numerals printed on notes and coins indicate the value of things. If this is the case, the visibility of these numerals may affect the owner's perception and behaviour. Some empirical findings have indeed shown that numerals play a significant role in shaping pattern of behaviour.<sup>46</sup> For example, five \$10 notes may not have the same psychological effect as a single \$50 note; their meanings for the owner can differ. In another empirical study, Eschelbach analysed German consumer diary data and found that purchases made with cash are less likely to be perceived as unnecessary after the transaction.<sup>47</sup>

Beyond numerals, the bodily and sensorial contact with coins and notes may also resonate with the possessor. When paying with cash, one may bodily feel that the money is diminishing or coming to an end, which may intensify the sensation of loss or 'pain of paying'. These observable and tangible dimensions appear to play a significant role when transactions are conducted with notes and coins.

Coins and notes, with their specific material configuration, may therefore mediate human behaviour in a particular way. As noted, the material properties of cash are integral to this form of mediation. A buyer first encounters the visual and sensorial qualities of coins and notes. These material characteristics may cause the world to resonate in a particular way: a world in which one earns money through effort, in which income is limited, where efficiency and labour are required to receive payment, where one must wait until the end of the month for a salary, and where economic uncertainty, such as unemployment during a recession, is possible. Such associations may form part of the background awareness of a buyer during payment and may generate an immediate sense of loss or discomfort. This 'pain of paying', in turn, may influence purchasing behaviour by discouraging extravagance or overspending.

45 See, e.g., George Simmel, 'Money in modern culture', *Theory, culture and society* 8 (1991): 17–31; Angela Condello, Maurizio Ferraris, and John R. Searle, *Money, Social Ontology and Law* (London: Routledge, 2019).

46 Amelie Gamble, Tommy Gärling, John Charlton, and Rob Ranyard, 'Euro illusion: Psychological insights into price evaluations with a unitary currency', *European Psychologist* 7, no. 4 (2002): 302–311.

47 Eschelbach, 'Pay cash, buy less trash'

In this sense, the key element appears to be the act of *reading* or *interpreting* signs: from the numerals inscribed on coins and notes to their weight and other material characteristics. Using the terminology of Ihde, one could argue that individuals hold a *hermeneutic relationship* with cash during the payment process. Observable material properties invite interpretation, and through this interpretive engagement a mediated world becomes present to consciousness. This mediated awareness may then function as a restraint on spending.

Things work differently, however, when it comes to bank cards. There are no meaningful numerals printed on cards; the numbers they display are static and unrelated to the amount of money available in the user's bank account. Nor does the weight of the card change during payment. In other words, the material appearance of the card remains entirely intact. Consequently, the mode of technological mediation associated with cards differs significantly from that of cash.

When someone pays using a card, the physical form of the card does not change in relation to the level of money in the associated bank account. Unlike cash, nothing in the card's materiality directly indicates the purchasing power of its holder. In this sense, cards tend to conceal what happens backstage. They hide the processes occurring behind the curtain, namely, the amount of money being spent and the remaining balance in the account. Payment cards therefore become *transparent* in the phenomenological sense: they withdraw from the user's attention and fade into the background.

As habituation increases, the use of the card becomes increasingly unconscious, and the backstage dimension gradually disappears from awareness. One may also speak here of the degree to which *sedimentation* has occurred. Cards become habitual; they become embodied, so to speak, as users connect to the world *through* the card without attending to it. In postphenomenological terms, one may develop an *embodiment relation* with the card during purchasing, provided that a sufficient level of familiarity has been acquired.

During payment, the purchased commodities and the accompanying sense of euphoria move to the foreground, while the world behind the card, namely the monetary value attached to it, fades into the background.

To summarise, behaviour is to a large extent interconnected with perception; they are indeed two sides of the same coin. A change in one is likely to give rise to changes in the other. Both behavioural and perceptual experience of the world may also be mediated by artefacts. Because bank cards are *transparent* and conceal the world behind them (mediating perception), they may invite more consumerist patterns of action (mediating behaviour), particularly when an *embodiment relation* has formed between users and the card. By contrast, coins and banknotes with their visible numerals and tangible sensory qualities (mediating perception), may invite a more thrifty attitude toward spending (mediating behaviour), given the *hermeneutic relation* people develop with them.

## Methods of Payment and Pattern of Spending

So far, we have argued that (1) each payment method gives rise to a specific form of technological mediation and may therefore encourage different patterns of purchasing behaviour; and (2) card-based payment systems may invite more consumerist forms of spending. Put differently, both cash and payment cards mediate the relationship between the buyer and the surrounding world, namely, the marketplace populated by a wide variety of commodities, but they do so in distinct ways. Importantly, the world enacted through card-based payment may appear more inviting or tempting to engage with.

If this is the case, there may be an association, we argued, between the use of payment cards and consumerism, and in some instances even leading to compulsive buying or even CBD. In other words, card-based payment may be positively associated with the condition of compulsive purchasing tendencies.

We do not claim, of course, that payment cards are the *sole* cause of CBD. It is likely that many factors, psychological, social, and others, contribute to the emergence of such compulsive behaviours. Moreover, our claim should be formulated in more modest terms than those used in clinical accounts of CBD. Nor do we suggest that the mediating role of payment cards *determines* users' behaviour. In line with the postphenomenological framework developed by Ihde, we reject technological determinism. Rather, our argument is that payment cards may incline users toward more consumerist patterns of behaviour, which in turn may contribute to overspending and, in some cases, to CBD or related patterns of compulsive purchasing.

Furthermore, the theoretical perspective we have outlined resonates with findings in the psychological literature, where restrictions on the use of payment cards are sometimes recommended as helpful for individuals suffering from CBD.<sup>48</sup> Such recommendations imply that willingness to pay is often higher when using cards than when paying in cash, suggesting a positive correlation between card usage and compulsive buying tendencies. In this respect, postphenomenological insights may provide a useful theoretical grounding for these observations in psychology. Limiting the use of cards during purchasing may therefore be beneficial, insofar as individuals suffering from CBD need to counteract the *transparency* of card-based payment processes.

## Conclusion, Discussion, and Suggestions

Payment by cash is no longer dominant in most countries, and it appears that we are gradually moving toward a cashless economy. Such a shift, from cash payments to card-based or other newer cashless payment methods, cannot occur without significant consequences. Artifacts mediate our engagement with the world, and any change in the artifacts involved is likely to alter the way this mediation takes place. The reason is that each technology affords specific characteristics that shape distinct modes of mediation. If we move from one kind of artifact to another, e.g., from paper money to payment cards, this transition will result in corresponding changes in our practices and experiences of payment.

Empirical findings support this impression. Several studies suggest that the transformation of payment methods has led to different patterns of purchasing behaviour.<sup>49</sup> In particular, people who use cards are more likely to overspend. Moreover, the difference is not merely quantitative but also qualitative. Consumers paying with cards are not only more likely to spend more, but they may also fill their baskets with lower-quality selections compared to those paying with cash.<sup>50</sup> For instance, the likelihood of purchasing unhealthy food increases significantly when payment is made by card.<sup>51</sup> Similarly, observes that when people make donations, payments made by card

48 See, e.g., Lorrin M. Koran and Elias Aboujaoude, 'Treating Compulsive Buying Disorder', *Current Treatment Options in Psychiatry* 1, no. 4 (2014): 315–324.

49 Promothesh Chatterjee and Randall L. Rose, 'Do Payment Mechanisms Change the Way Consumers Perceive Products?', *Journal of Consumer Research* 38, no. 6 (2012): 1129–1139; Eschelbach, 'Pay cash, buy less trash?'

50 Dilip Soman, 'The Effect of Payment Transparency on Consumption: Quasi-Experiments from the Field', *Marketing Letters* 14, no. 3 (2003): 173–183.

51 Manoj Thomas, Kalpesh Kaushik Desai, and Satheeshkumar Seenivasan, 'How Credit Card Payments Increase Unhealthy Food Purchases: Visceral Regulation of Vices', *Journal of Consumer Research* 38, no. 1 (2011): 126–139.

tend to result in higher contributions than those made in cash.<sup>52</sup> Martina Eschelbach's analysis further shows that purchases made with cash are less likely to be perceived as unnecessary after the transaction.

In this paper we have attempted to provide a philosophical explanation for the view that paying with cards rather than cash may contribute to overspending. Such behavioural changes, we have argued, *might* in turn be associated with extreme cases such as CBD. Drawing on postphenomenology, we have analysed the different modes of mediation involved in cash and card payments—namely coins and banknotes on the one hand, and payment cards on the other. We argued that card use typically involves an *embodiment relation*, whereas the relation to cash is primarily *hermeneutic*. When using coins and banknotes, individuals must interpret their material and visual properties—especially the numerals printed on them—in order to grasp their value. This interpretative engagement may lead people to experience payment as somewhat 'painful', which can in turn restrain spending. By contrast, payment cards tend to conceal the background processes that determine the available balance. The result may be a comparatively painless form of payment that increases the willingness to pay. Cards are therefore *transparent* in the sense that they recede into the background of attention, which may open the way to overspending. From this perspective, our analysis supports the idea that certain restrictions on card usage may be beneficial, particularly in cases where CBD is diagnosed or suspected.

As already mentioned in section 3, approximately 5% of the population in Western societies suffer from CBD.<sup>53</sup> It is plausible to assume that the proportion of people who display consumerist tendencies, without necessarily reaching the clinical threshold of the disorder, is considerably higher. In this sense, consumerism may affect a substantial portion of Western societies, and likely societies beyond the West as well.

Our postphenomenological analysis also offers additional insights. First, it invites reflection on newer payment technologies. If, as our analysis suggests, transparency and the resulting experience of painless payment are predictive factors, then the more transparent a payment method becomes, the greater the likelihood of overspending, and, in extreme cases, the emergence of CBD-like conditions. Online shopping platforms provide a clear example, given their design and ease of use. Even more striking are mobile payment systems, where materiality is further reduced and transparency correspondingly increased. However, because empirical research on these newer payment tools remains limited,<sup>54</sup> it would be premature to push this argument too far.

Second, our analysis also has prescriptive implications. The question becomes how we might mitigate the undesirable consequences of payment cards while preserving their advantages. Although completely prohibiting the use of cards or other highly transparent payment methods such as smartphone payments, might offer a temporary solution for individuals suffering from CBD, less radical and more sustainable approaches are worth considering. Postphenomenology provides some guidance in this regard. One possible strategy would be to reintroduce a hermeneutic dimension into card usage. This could involve incorporating visible features into payment interfaces that more clearly reflect the financial realities behind each transaction. In other words, cards need not remain as transparent as they currently are in order to remain user-friendly.

Several possibilities can be imagined. For instance, transactions could be temporarily paused

52 Adriaan R. Soetevent, 'Payment choice, image motivation and contributions to charity: evidence from a field experiment', *American Economic Journal: Economic Policy* 3, no. 1 (2011): 180-205.

53 Maraz et al., 'The Prevalence of Compulsive Buying'.

54 See, e.g., Joe Boden, Erik Maier, and Robert Wilken, 'The Effect of Credit Card versus Mobile Payment on Convenience and Consumers' Willingness to Pay', *Journal of Retailing and Consumer Services* 52 (2020): 1-10.

until the user confirms a notification message from the bank on their smartphone. The message could present the transaction in different formats. For example, through a visual graph indicating both the amount being paid and the remaining balance. Alternatively, it might display a single numerical ratio showing the relationship between the amount spent and the remaining funds. One might even imagine using this ratio as the PIN code required to authorise the payment, thereby simultaneously strengthening security and restoring a hermeneutic engagement with the transaction.

These examples merely illustrate potential directions for redesigning payment technologies in ways that reduce transparency without sacrificing usability. Many other possibilities could emerge through creative and sustained collaboration among relevant stakeholders—including consumers, suppliers, public health officials, governments, engineers, policymakers, investors, and philosophers acting as facilitators. Our aim in this paper has not been to propose a fully developed technical solution to the problem of payment cards and compulsive buying disorder. Such a task would necessarily require a larger interdisciplinary effort. Rather, our intention has been to illuminate the problem and to provide a conceptual framework that may guide future attempts to address it.

Third, a further contribution of our analysis is a call to take environmental variables, especially the role of technology, more seriously. Approaches that remain largely individualistic, such as certain strands of psychodynamic theory, may overlook important contextual factors when environmental variables are left out of consideration. This limitation can prevent such approaches from fully addressing all relevant dimensions of clients' conditions, as illustrated in the case of excessive consumerism and CBD. By contrast, frameworks provided by postphenomenology and ecological and systemic perspectives, may be better equipped with the conceptual tools needed to address such (public) health conditions, as they explicitly account for the broader technological and environmental contexts in which behaviour occurs. Our central claim is that the material configuration of payment instruments mediates the phenomenal experience of value, and that this mediation, in turn, shapes characteristic patterns of consumerist behaviour. If this account is correct, it may offer valuable guidance to helping professions and for the design of future public health interventions.

### Acknowledgments:

We are grateful to Emanuele Lacca, Cécilia Lombard, and Benjamin Smart for their comments and discussions. We also thank the anonymous referees, whose reports were especially valuable. This article has been long in the making and was never presented at a conference. Although we initially planned to present a joint version at the Philosophy of AI conference (Prague, September 25–27, 2025), we ultimately decided to present our individual works in progress instead (on Sufi philosophy and existential risks, respectively). The manuscript was originally submitted in a version prepared entirely without assistance from LLMs. During the proofreading stage, we used Copilot and ChatGPT to refine the style of most sections.

**Contact**

***Dr. Ehsan Arzroomchilar***

University of South Bohemia  
Faculty of Theology, Centre for Applied Philosophy  
Kněžská 8, 370 01 České Budějovice 1, Czech Republic  
arzroe00@tf.jcu.cz

***Dr. Daniel D. Novotný***

University of South Bohemia  
Faculty of Theology, Centre for Applied Philosophy  
Kněžská 8, 370 01 České Budějovice 1, Czech Republic  
novotnyd@tf.jcu.cz

&

University of Johannesburg  
Centre for Philosophy of Epidemiology, Medicine, and Public Health  
B Ring 703 Auckland Park Kingsway Campus, Johannesburg, South Africa

# Technological Hegemony in the Global South: epistemicide, Dehumanisation and Digital Domination

Chileshe Mulenga Nicholas, David Mutemwa

DOI: 10.32725/cetv.2026.010

## Abstract

This paper examines the dominance of Western technological systems in the Global South within an increasingly digitalised world where education, healthcare, governance, and social interaction are shaped by digital technologies. It argues that these systems reinforce epistemic inequality by privileging Western knowledge while marginalising indigenous epistemologies, thereby threatening human dignity, epistemic justice, and cultural identity. Drawing on Neil Postman's concept of technopoly alongside African philosophical perspectives on relationality and communal knowledge, the study demonstrates how Western-controlled digital platforms and infrastructures operate as hegemonic systems that erode local knowledge traditions and subordinate human agency to technological efficiency and economic utility. Methodologically, the paper adopts a qualitative research design based on documentary research and secondary data analysis, using thematic content analysis and critical discourse analysis to examine academic literature, policy documents, and empirical studies related to technological inequality, digital capitalism, and epistemic marginalisation. The study concludes that the uncritical adoption of foreign technological systems contributes to technological epistemicide and the emergence of a dehumanised society in which autonomy and indigenous knowledge are diminished. It therefore advocates an ethical, context-sensitive, and human-centred technological framework that integrates local epistemologies and promotes justice globally.

**Keywords:** Digital Divide, Technopoly, Inequality, Technological hegemony, technological epistemicide, Technology, digital imperialism, Human Dignity, Dehumanisation, Digital capitalism, Autonomy.

## Introduction

The paper examines the effects of technological dominance in the Global South, focusing on issues such as dehumanisation, digital imperialism, technological epistemicide, and the digital divide. Guided by Neil Postman's theory of *technopoly*, a cultural condition in which technology

dominates and redefines all forms of life,<sup>1</sup> the paper argues that technological progress often occurs at the cost of human dignity and traditional values. This technological supremacy, pursued in the name of efficiency, results in the erosion of equity and inclusion.<sup>2</sup> Consequently, digital exclusion from essential sectors such as education, health, and employment has intensified, entrenching new forms of social and ethical inequality.

Drawing on Kant's notion of autonomy as self-legislation and moral independence,<sup>3</sup> Heidegger's concept of *Gestell* or technological enframing that reduces humanity to a mere resource,<sup>4</sup> and Mill's defense of liberty as a safeguard against societal domination,<sup>5</sup> the paper calls for a re-orientation of technological relations. It proposes ethically grounded strategies such as promoting digital equality, respecting human autonomy, and developing inclusive digital infrastructures as essential steps toward a more human-centered technological future for Africa.

## Methodology

This paper has adopted a qualitative research design grounded in philosophical inquiry and supported by secondary data analysis. Given the nature of the paper, which seeks to explore the ethical, cultural, and epistemological effects of technological hegemony in the Global South, the research has not relied on primary data collection but employed desk research as primary method. The desk or documentary research draws on a wide range of secondary sources, including academic publications, philosophical texts, policy reports, and empirical studies on digital inequality and technological development. Suffice to note that the collected secondary material was analysed using a combination of thematic content analysis and critical discourse analysis. Thematic Content Analysis was employed to identify, analyse, and interpret themes across the selected texts. Key themes that are explored in this paper include Digital divide and exclusion, Digital imperialism and data colonialism, Technological epistemicide, dehumanisation and loss of autonomy. To further deepen the analysis, the paper has employed critical discourse analysis to examine how narratives and representations within digital and academic spaces reinforce structures of power and dominance. This approach is particularly relevant in uncovering how Western technological frameworks and platforms shape global knowledge production while silencing the non-Western epistemologies. Since the research has been theoretical, no human participants were involved. Overall, the authors interpreted the social, cultural, and ethical dimensions of technological dominance in the Global South.

## Problem Statement

In an increasingly digitised global landscape, it has become evident that nations possessing technopolitic characteristics are primarily responsible for diffusing, exporting, and showcasing the dominance of their technological innovations. While technology is often celebrated as a transformative force for human development, its proliferation has simultaneously generated profound concerns that transcend national boundaries, affecting both technopolitic societies themselves and the developing nations that consume their technologies. Among these concerns is the widening

---

1 Neil Postman, *Technopoly: The Surrender of Culture to Technology* (New York: Vintage Books, 1992), 71.

2 Jan van Dijk, *The Digital Divide* (Cambridge: Polity Press, 2020), 45.

3 Immanuel Kant, 'An Answer to the Question: What Is Enlightenment?' (1784), 54.

4 Martin Heidegger, *The Question Concerning Technology and Other Essays*, trans. William Lovitt (New York: Harper & Row, 1977), 23.

5 John Stuart Mill, *On Liberty* (London: John W. Parker and Son, 1859), 14.

digital divide and the emergence of technological epistemicide where dominant technological regimes suppress, marginalise, or erase indigenous knowledge systems. Developing nations across Africa, find themselves not only as passive recipients of foreign technological systems but also as subjects of structural inequalities embedded within these systems. This paper, therefore, seeks to delineate some of the challenges introduced by technologies in developing contexts. Furthermore, it aims to propose contextually relevant strategies through which Africa and other developing regions might reorient the adoption and application of technology. The ultimate goal is to ensure that technological advancement serves ethical ends, respects cultural identity, and promotes inclusive human development.

## Purpose and Research Questions

This paper seeks to explore how digital technologies have shaped knowledge, access, autonomy and cultural practices in the Global South with a bias on Zambia. This done by first, thematically exploring the effects of technological hegemony in the Global South. Secondly, the paper tries to critically analyse how the dominance of Western technological systems contributes to the epistemicide of indigenous knowledge systems in the Global South. Finally, the paper seeks to propose contextually relevant and ethically grounded strategies for inclusive technological development in the Global South. At the core of this paper, are the following research questions. What are the effects of technological hegemony in the Global South? How does the dominance of Western technological systems contribute to the epistemicide of indigenous knowledge systems in the Global South? Lastly, what are the contextual relevant and ethically grounded strategies for inclusive technological development in the Global south?

## Theoretical Background

Our thoughts in this paper are driven by the understanding that technology builds up and flourishes in a given context. The theory that best explains this technological background is called Technopoly. In his compendium entitled '*the Technopoly: The Surrender of Culture to Technology*', Postman understands *Technopoly* as 'a state of culture which consists in the deification of technology...' <sup>6</sup> Society surrenders its cultural traditions and meanings to the authority of technology. In a sense, it is the civilisational condition where technology becomes the defining source of truth, value, and order. It is for this reason that Postman observed that a technopolic society represents a culture in which technology is deified. Postman traced the development of technopoly through three stages, namely, *Tool-Using Cultures*, *Technocracies*, and finally *Technopoly*.

A *Tool-Using Cultures* is a stage where tools support but do not dominate culture because at this point the force of technology is constrained by moral/religious boundaries. <sup>7</sup> As time moves, Postman observed emerging technocratic society in which *Technocracies* begin to shape culture and values but coexist with older worldviews. He asserted that a technocracy is a society only loosely controlled by social custom and religious tradition, and driven more by technical enterprise. <sup>8</sup> The final stage is what Postman calls *Technopoly*. It is a stage where culture submits entirely to the technological dominance and loses its normative compass. It is actually for this reason that

---

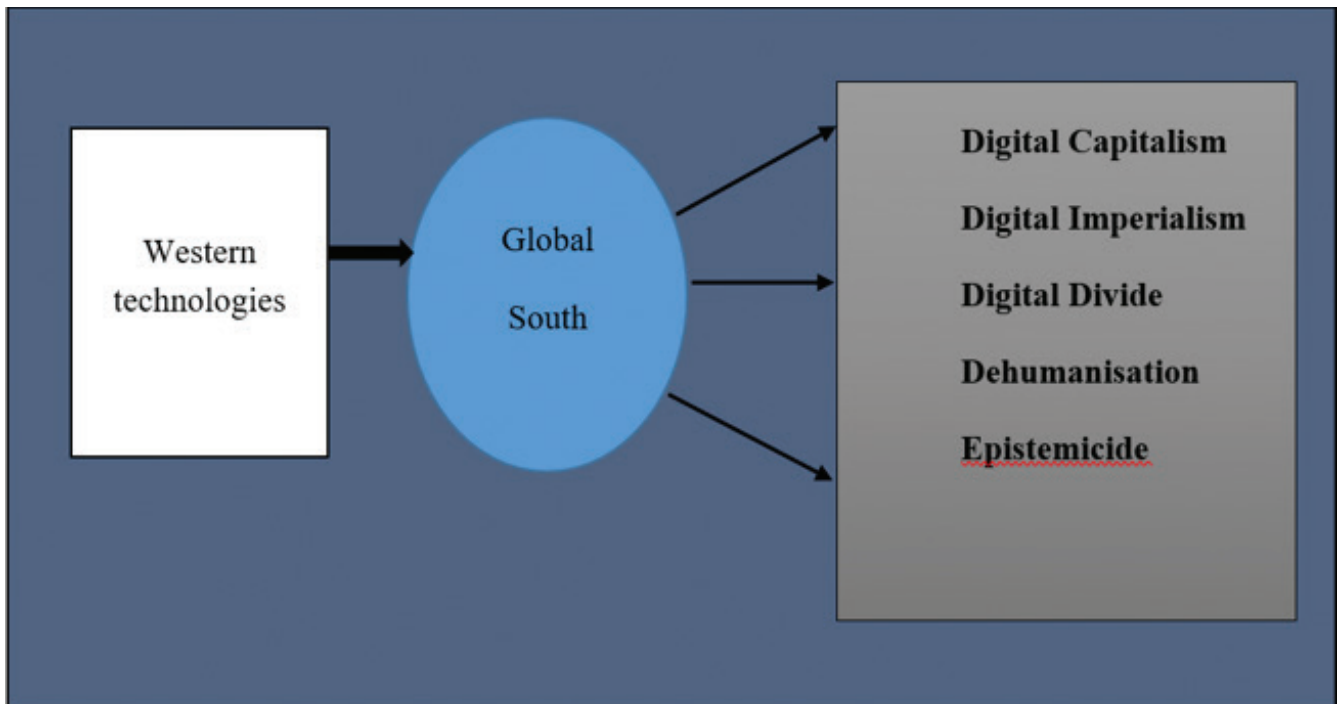
<sup>6</sup> Postman, *Technopoly: The Surrender of Culture to Technology*, 71.

<sup>7</sup> Postman, *Technopoly: The Surrender of Culture to Technology*, 22-26.

<sup>8</sup> Postman, *Technopoly: The Surrender of Culture to Technology*, 48.

Postman declared that technopoly is a totalitarian technocracy. Postman further observed that technopoly renders alternative worldviews invisible and therefore irrelevant. Through technology, religion, art, and family is redefined in such a way that such definitions fit its new requirements. In the context of the Global South, most countries are increasingly surrendering to the dictates and demands of technopolitic dominance. This dominance seems to have many effects on the culture, human dignity and traditional values in the Global South.

*Conceptual Framework of Negative Effects of Technological Hegemony in the Global South.*



*Figure 1: Conceptual framework: Negative effects of Technological Hegemony*

## Thematic Exploration of Negative Effects of Technologies in the Global South.

### *Digital Capitalism*

In his famous book ‘*Age of Surveillance Capitalism*’, Zuboff argues that ‘Surveillance capitalism does not deliver on the promise of digital equality. It intensifies existing inequalities, redistributing wealth and knowledge upward while marginalising and extracting from the already powerless.’<sup>9</sup> The author further observes that:

‘Surveillance capitalism has exacerbated the erosion of morality in terms of the violation of ethical principles of confidentiality and consent as much as it promoted digital alienation. Surveillance capitalism thrives in conditions where users cannot meaningfully learn, consent, or resist.’<sup>10</sup>

In short, the tech giants like Google, Facebook, and Amazon collect and monetise personal data without explicit user consent. Through technology human race is stripped of privacy as Zuboff observes ‘surveillance capitalists know everything about us, but we know almost nothing about them. Surveillance capitalism thrives on this one-way mirror of knowledge asymmetry.’<sup>11</sup> We can

<sup>9</sup> Shoshana Zuboff, *The Age of Surveillance Capitalism* (New York: Public Affairs, 2019), 505.

<sup>10</sup> Zuboff, *Surveillance Capitalism*, 379.

<sup>11</sup> Zuboff, *Surveillance Capitalism*, 11.

obviously argue with Zuboff that this situation does not constitute exchanges but surreptitious extractions from unequipped users who do not understand what is taken away from them. This is what we can term as digital alienation.

### Digital Imperialism

In Africa, the domination of foreign infrastructures and technology, which frequently ignore local requirements and contexts, is slowly culminating into Digital Imperialism. This is a form of modern imperialism where foreign powers impose technological systems that reshape political, cultural, and economic life in target regions of Africa without exercising consent or local contextualisation. The Scholar, Michael Kwet calls it *digital colonialism*, where foreign powers, led by the United States, are planting infrastructure in the Global South engineered for its own needs, enabling economic and culture domination while imposing privatised forms of governance.<sup>12</sup> Moreover, for Couldry and Mejias, this is tantamount to '*data colonialism*'. The latter refers to a system in which human experiences are continuously extracted, commodified, and restructured to serve capital accumulation.<sup>13</sup> In this framework, people are not only consumers of technology but become unwitting producers of value, contributing data without informed consent or reciprocal benefit. Further technologies from technopolic nations have brought about decentralised extraction and control of data from citizens without their explicit consent through communication networks developed and owned by Western tech companies.<sup>14</sup> Overly, it is clearly noticeable that the implications of this phenomenon (i.e., modern digital dominance) reflects the extractive logics of historical colonialism except that this time, the colonised space is the human psyche and social relations.

### Digital Divide

The Organisation for Economic and Development defines digital divide as the gap between individuals, households, businesses and geographic areas at different socio-economic levels with regard both to their opportunities to access information and communication technologies (ICTs) and to their use of the Internet for a wide variety of activities.<sup>15</sup> In simple terms, it is a gap created by those having access to information and communication technologies and those who do not. In most developing country, this phenomenon further has raised concerns over which class of people controls and access authentic knowledge, data, and societal values. This is obviously Digital exclusion which has resulted in practical limitations on access to public services, quality education, healthcare, and job opportunities. In this same line of thought, Selwyn condemned the excessive use of technology in solving social problems by arguing that this technological approach of solving problem creates new forms of exclusion especially among the old and the poor who may not be able to afford to do with technology.<sup>16</sup>

Moreover, Van Dijk emphasises that technology has introduced what he calls second level digital divide. This is the divide in digital skills and meaningful usage which is becoming more relevant

12 Michael Kwet, 'Digital Colonialism: U.S. Empire and the New Imperialism in the Global South', *ROAR Magazine*, no. 10 (2020), <https://roarmag.org/essays/digital-colonialism-the-evolution-of-american-empire>.

13 Nick Couldry and Ulises A. Mejias, *The Costs of Connection: How Data Is Colonizing Human Life and Appropriating It for Capitalism* (Stanford, CA: Stanford University Press, 2019), 3.

14 Michael Kwet, 'Digital Colonialism: The 21st Century Scramble for Africa through the Extraction and Control of User Data', *Michigan Journal of Race & Law* 25 (2019): 422–23.

15 Organization for Economic Co-operation and Development (OECD), *Understanding the Digital Divide* (Paris: OECD Publications, 2001), 5.

16 Neil Selwyn, *Digital Divide: A Critical Reader in Digital Inequality* (London: Routledge, 2013), 103.

than ever.<sup>17</sup> This second level digital divide is somehow triggered by the cost of using technology. For instance, in Zambia, high data costs make internet access a luxury for many rural dwellers who cannot afford and this cost excludes them from having a meaningful use of internet. This is usually the case in most developing countries and African nations in particular.

### *Dehumanisation Effect of Western Technology*

The digital infrastructures appears to reflect a disregard for autonomy and liberty of citizenry. This is obvious not only in nations that are technopolic but worse again in developing African States where Western technological domination tends to be both unsynchronised and insensitive to the realities and local contexts.

### *Technopaternalism: The Erosion of Human Autonomy in the Digital Age*

In the context of digital technologies, the erosion of human autonomy often manifests through what scholars have termed technopaternalism whether in digitalised nation or non-digitalised nations. Technopaternalism is a combination of two words which are techno and paternalism. Based on the Latin word *pater* which translate into ‘father’, paternalism can be understood within the hierarchical model of family-life, where the father cares for his children and advises them what to do and what not to do. According to Merriam-Webster’s Collegiate Dictionary, paternalism is defined as a system under which an authority undertakes to supply the needs or to regulate the conduct of those under its control in matters affecting them as individuals as well as in their relations to the authority and to each other.<sup>18</sup> In logical terms, paternalism as a system where, given an instance A ( e.g., technological gadgets or robotics in our case) which makes a decision or performs an action X which affects a subject B (e.g., citizens in non-digitalised nations) directly. In this case X is paternalistic just in case X is considered by B as limiting, punishing or in any other way cutting down on freedom of B. In this case, B takes X as one that should not be overruled or in any other way disregarded. Therefore taking into account this comprehensive meaning of paternalism, suffice then to define technopaternalism as the condition wherein technological systems assume decision-making authority on behalf of users. The users are reduced to passive recipients of choices pre-structured by opaque code and predictive analytics, thereby undermining their capacity for informed and reflective agency. In fact, this paternalistic tendency of technology becomes worse for developing countries in which context sensitivity is not embedded in technology. This obviously leads to technology making decisions that do not support our every-day lives. When technology fails to take into account local realities, especially for developing nations, it (technology) becomes more of a patronising nuisance which further affects the autonomy and liberty of the citizenry for the purpose of showing off its functionalities ( or capabilities).

From a Heideggerian perspective, technopaternalism parallels the concept of *Gestell* or enframing. According to Heidegger’s analysis, *Gestell* or enframing captures the instrumentalist view that technology imposes on the citizenry. Enframing is the gathering together of that setting-upon which sets upon man, (...) to reveal the real, in the mode of ordering, as standing-reserve.<sup>19</sup> This passage underscores the fact that technology considers humans among many other entities as mere resources. That is why Heidegger would further state that everywhere everything is ordered

17 Jan van Dijk, *The Digital Divide* (Cambridge: Polity Press, 2020), 65.

18 Merriam-Webster. *Merriam-Webster’s Collegiate Dictionary*. 11th ed. Springfield, MA: Merriam-Webster, 2003.

19 Heidegger, *Question Concerning Technology*, 20.

to stand by, to be immediately at hand, indeed to stand there just so that it may be on call for a further ordering.<sup>20</sup> It can be clearly construed that through enframing, Human Beings are reduced to resources but also conditions them to see themselves as mere components within a technical apparatus. This is against the moral campus dictated by the categorical imperative on humanity that we need to act in such a way that humanity both in your person and that of a neighbour ought not to be used as means but as the end in itself. The technopolic condition therefore, presents both the moral crisis. It dehumanises us by challenging the very notion of what it means to be a human capable of making its own informed decisions. To put it simple, the point which is underscored here is that when technological systems undermine human decision-making through opaque algorithms and surveillance, they violate the Kantian ideal of enlightenment and autonomy.

### *Algorithmic Tyranny and the Erosion of African Intellectual Autonomy*

Across the African continent, digital transformation is dramatically reshaping how individuals access information, express their views, and engage with public life. Suffice to mention that the emerging technology (AI, mobile connectivity, social media platforms, etc.) has opened new spaces for civic innovation and political participation. However, these advancements are double-edged. Alongside increased connectivity comes a rising tide of algorithmic content filtering, digital surveillance, and state-imposed internet shutdowns. These developments pose a great risk to liberty, autonomy, and justice in the digital era.

According to Mill, liberty of thought and expression is foundational to human development. Every citizen requires individual liberty, particularly in the realm of opinion and expression, as a means to personal and societal progress.<sup>21</sup> He famously contends that even false or unpopular views possess value, for they challenge prevailing beliefs and provoke deeper inquiry. Intellectual diversity, for Mill, is not a threat but a social necessity.

However, the importation of algorithmic logic by Western technology has now dominated African digital platforms and is slowly encouraging the tyranny of the majority. Nowadays, it is evident that algorithms prioritise content based on popularity, virality, and engagement metrics rather than intellectual or cultural richness. This suggests that there is amplification of dominant narratives while sidelining regional and indigenous knowledge systems. This state of affair undermines the sovereignty of developing countries who are the consumers of this Western technologies. In fact, John S. Mill once echoed that the worth of a state in the long run is the worth of the individuals composing it.<sup>22</sup> This is to simply say that when the intellectual autonomy of individuals is eroded by automated systems, the democratic fabric of society is fundamentally weakened.

Moreover, suffice to note that in Africa, the dominance of Western-owned digital platforms complicates the information landscape. For instance, Facebook, YouTube, and TikTok operate using proprietary algorithms with little regard for local epistemologies or socio-political sensitivities. Nyabola argues that the very architecture of the internet is skewed against African users, privileging English-language content and urban perspectives.<sup>23</sup> This tendency resonates with what Santos terms the epistemicide of non-Western knowledge systems. This is what this paper tries to explore further in the next chapter.

20 Heidegger, *Question Concerning Technology*, 17.

21 John Stuart Mill, *On Liberty*, 63.

22 John Stuart Mill, *On Liberty*, 116.

23 Nanjala Nyabola, *Digital Democracy, Analogue Politics: How the Internet Era is Transforming Politics in Kenya* (London: Zed Books, 2018), 17.

## The Technological Epistemicide in the Global South

When you are unaware of their silent violence, pesticides appear as harmless domestic tools; yet their use revealed concealed ecological consequences which illustrates how seemingly ordinary actions can obscure profound environmental harm. The underscored point here is that much like pesticides, whose destructive capacity remains hidden beneath their utilitarian appearance, technological systems in the global south appear to be operating in ways that are quietly reshaping human behaviour, knowledge systems, and social relations without immediate visibility. This normalisation of unexamined technological adoption in Africa is fostering a condition that is desensitising Africans to the deeper consequences of their actions thereby accepting technological outputs as authoritative and unquestionable. As Rachel Carson demonstrates in *Silent Spring*, human exposure to chemical agents is often pervasive yet invisible, embedded within everyday life and unfolding gradually through cumulative ecological effects.<sup>24</sup> This insight underscores how technologies that appear benign, but may in fact, carry latent destructive capacities that only become apparent over time. In a similar vein, Western technology is concealing its transformative power behind convenience and efficiency by ultimately subordinating human judgment, African cultural values, and ecological awareness to the logic of technological systems. This is in accordance to Neil Postman who established that technology has taken a direction, which renders alternative worldviews invisible and therefore irrelevant. In this sense foreign technology, must not be perceived as only a mere act, but as an act of epistemicide that possesses hidden power capable of slowly committing massive murder of developing nation's value system and beliefs. Santos understands epistemicide as the murder of indigenous knowledge and values systems in Africa and the immediate replacement of such knowledge by that from the (Western) dominant episteme.<sup>25</sup> Epistemicide is the phenomenon, which has become deeply entrenched across many African societies under the pretext of promoting development through the adoption of dominant foreign technologies. This is not an accidental by-product of modernisation, but a deliberate and systematic process sustained through a threefold strategy. Firstly, the active eradication of indigenous knowledge systems which according to Ngũgĩ wa Thiong'o, the domination of a people's language by the languages of the colonising nations was crucial to the domination of the mental universe of the colonised.<sup>26</sup> Secondly, the institutional silencing of local epistemic voices, and thirdly, the cultural dislocation that severs communities from their historical, intellectual, and ontological foundations. The following section seeks to substantiate further these three strategies.

**System Eradication** requires that digital technologies imported to Africa often displace local knowledge systems, overriding them with Western frameworks encoded in software, platforms, and algorithms. Obviously, this is a continuation of colonial logic, replacing indigenous epistemologies with dominant ones. This happening in schools where Western curricula has dominated in the African education sector. It is happening in the health sector where African traditional medicine is not given any platform or significant lab tests to prove ascertain their curative effectiveness. We can highly refer to Sondashi Formula or SF-2000, a claimed herbal cure for HIV/AIDS developed by a Zambia health prsonnel Dr Ludwig Sondashi. Despite early claims of success, there exists no credible scientific evidence substantiating its effectiveness, nor has it been recognised on reputable digital platforms or in peer-reviewed literature. Moreover, it remains unapproved

24 Rachel Carson, *Silent Spring* (Boston: Houghton Mifflin, 1962), 15–17.

25 Boaventura de Sousa Santos, *Epistemologies of the South: Justice against Epistemicide* (London: Routledge, 2014), 238.

26 Ngũgĩ wa Thiong'o, *Decolonising the mind: The politics of language in African literature* (James Currey, 1986), 16.

by leading global health authorities, including the World Health Organisation (WHO) and the United States Food and Drug Administration (U.S. FDA), underscoring the absence of rigorous evaluation and regulatory endorsement for initiatives of African origin. We could go further and reveal other broader coverage of this act of epistemicide on the African continent. Did you know that Africa's land area is over 30 million square kilometres, large enough to fit the United States, China, India, and much of Europe combined within its borders?<sup>27</sup> However, this knowledge is misrepresented by Web Mapping Technology (the Web Mercator Projection). No explicit justice will be done to correct this narrative as doing that will defeat the whole purpose of murdering knowledge. We could say, Africa, through Western technology, has been geographically, culturally, etiologically and epistemologically side-lined and consequently murdered.

**Silencing** has become a deliberate strategy through which contemporary digital technologies assert epistemic dominance over Africa. By erasing or disregarding African context-specific knowledge, needs, and narratives, Western-owned platforms systematically marginalise indigenous wisdom, communal practices, and sustainable environmental stewardship. This is not mere oversight but it is a manifestation of structural power imbalances and epistemic injustice, whereby African ways of knowing are subordinated to foreign epistemologies and subordinated voices are rendered invisible in the digital sphere. This has resulted into what Santos terms as the 'violent erasure'. According to this concept, Santos argues that 'epistemologies of the South have been consistently delegitimised, a process that he calls epistemicide to mean the murder of knowledge.'<sup>28</sup> A case study on ecological knowledge in rural Kalomo villages of Zambia is a clear evidence of this. The researchers have documented a phenomenon called 'luzibo kusangana' (integrated knowledge) in which they highlighted how local environmental practices that have been lost, how local knowledge has been intergenerationally transferred, and how the interaction between local and 'external knowledge' (i.e., scientific and 'expert' knowledge originating from outside the community, brought in by external actors such as extension agents, NGOs, etc.) within the communities brings about a hybridisation process.<sup>29</sup> Hybridisation is not merely the adoption of foreign ideas, but the dynamic blending of knowledge systems, which can strengthen community resilience but may also involve selective loss or marginalisation of some traditional practices. In all this, external knowledge was perceived as superior and local practices were eclipsed. Additionally, Santos further observed that non-Western knowledge systems have been systematically underrepresented online or filtered through Western frameworks. For Santos, this is a pure cognitive injustice which shows the inequality in knowledge recognition and how inseparable it is from social injustice.<sup>30</sup>

The third strategy by which African epistemologies is exterminated in this digital Western digital space is by exercising **cultural dislocation**. The latter underscores the destruction of indigenous knowledge which results into intellectual loss. It involves the destruction of the social practices and the disqualification of the social agents that operate according to such knowledge.<sup>31</sup> In this line of thought, an African scholar has argued that the exposure to Western digital space

27 Harm J. de Blij, Erin H. Fouberg, and Alexander B. Murphy, *Human Geography: People, Place, and Culture*, 10th ed. (Hoboken, NJ: John Wiley & Sons, 2011), 327.

28 Boaventura de Sousa Santos, *Epistemologies of the South: Justice against Epistemicide* (London: Routledge, 2014), 92.

29 Kenneth Moombe, Choolwe Nkonde, and Peter E. Nkonkomalimba, 'Hybridisation, Resilience, and Loss of Local Knowledge and Natural Resource Management in Zambia', *Human Ecology* (2024), 52.

30 Boaventura de Sousa Santos, *Epistemologies of the South: Justice against Epistemicide* (London: Routledge, 2014), 189.

31 Santos, *Epistemologies of the South*, 243.

has affected our community negatively. Most information on the internet reflects western values and do not fully reflect the traditions, beliefs, values and culture upon which the African societies have been built.<sup>32</sup> This clearly depicts of how Western epistemic dominance systematically marginalises knowledge from the Global South. Suffice to therefore conclusively say that Digital technologies imported to Africa often displace local knowledge systems, overriding them with Western frameworks encoded in software, platforms, and algorithms. As alluded to already, this it is a continuation of colonial logic, replacing indigenous epistemologies with dominant ones.

## Critical Observations and Recommendations

### Critical Observations

This paper has argued that the contemporary digital condition of the Global South, particularly in Africa, cannot be understood merely as a story of technological progress or modernisation. Rather, when examined through the philosophical lens of Neil Postman's theory of technopoly, technological expansion reveals itself as a deeply normative force that reorders culture, knowledge, power, and human agency. In technopolitic conditions, technology ceases to function as a neutral tool and instead becomes an authoritative framework that dictates what counts as knowledge, efficiency, truth, and value. For the Global South, this submission to technologically hegemonic systems has produced a constellation of ethical and social challenges, including digital imperialism, technological epistemicide, widening digital divides, and the gradual erosion of human autonomy and dignity.

Drawing from Heidegger's notion of *Gestell*, the paper demonstrated how imported digital infrastructures reduce both human beings and indigenous knowledge systems to mere standing-reserve, valued only insofar as they can be extracted, optimised, or monitored. This enframing is intensified by surveillance capitalism, as described by Zuboff, wherein African users become sources of behavioural data rather than autonomous participants in digital life. In this context, data extraction mirrors historical colonial logics, except that the terrain of extraction has shifted from land and labour to cognition, culture, and social relations. As a result, technological dominance functions as a new modality of imperial power which is subtle, decentralised, and largely unaccountable.

Furthermore, the paper established that technological epistemicide is not an accidental by-product of digitalisation but a structural outcome of Western-dominated technological systems. Through the systematic displacement, silencing, and disqualification of indigenous African epistemologies, digital technologies reproduce what Santos describes as cognitive injustice. This epistemic marginalisation is compounded by algorithmic governance and platform monopolies that privilege Western languages, values, and narratives, thereby reinforcing asymmetries of recognition and authority in the global knowledge economy.

From a normative standpoint, the erosion of autonomy through technopaternalism and algorithmic control directly contradicts the Kantian ideal of enlightenment as self-legislation and Mill's defense of liberty as the foundation of intellectual and social progress. When technological systems pre-structure choices, filter information, and invisibly govern conduct, individuals are no longer treated as ends in themselves but as means within technical and economic systems. Such conditions threaten not only individual freedom but also the democratic and moral fabric

32 Memory Mkandawire, 'The Impact of Digital Media on Zambia's Old Storytelling Traditions', *Dear Lelo Blog*, December 1, 2012, [https://dearlelo.blogspot.com/2012/12/impact-of-digital-media-on-zambias-old\\_1.htm](https://dearlelo.blogspot.com/2012/12/impact-of-digital-media-on-zambias-old_1.htm).

of societies in the Global South.

## Recommendations

In this article, we have established on various points, how western technology can be a nuisance more especially when it is not adapted to the African context. This section seeks to delineate a number of approaches that could be employed to facilitate the implementation of a more human-centered technology.

### *Inclusive Technology*

A well-adjusted technology that can take into account the mechanisms of local norms, law, local market and seems to be the most promising approach. In the context of mitigating the adverse effects of Technopaternalism, consumers especially in Africa needs put in place legal obligations that can compel manufacturers to design technology that is flexible and sensitive to the consumers' diverse needs to allow individual have a diversified application according to different wishes and needs in the local contexts. In other ways, the global south needs to establish obligatory and socially accepted guidelines for designing technologies that are user-friendly. In effect, the goal is to allow for the establishment 'calm technologies' to be operational in foreign lands especially on the continent of Africa. In this line of thought, Ivan Illich would advocate for the establishment of *convivial technologies*. He observed that convivial tools are those, which give each person who uses them the greatest opportunity to enrich the environment with the fruits of his or her vision.<sup>33</sup> The point which is being underscored here is that African and other developing countries need responsive technologies capable of enhancing people's freedom to shape their world, supports creativity, and fosters participation without creating structural dependence. In this sense the ultimate goal envisaged here would be creating convivial African nations or societies where there are social arrangements that guarantee for each member the most ample and free access to the tools of the community and limit this freedom only in favour of another member's equal freedom.<sup>34</sup> Amartya Sen underscores the significance of genuine freedoms as essential conditions for individuals to pursue the lives they value. Building on this framework, Martha Nussbaum identifies central human capabilities such as senses, imagination, and thought, which are critical for exercising the freedom to seek, receive, and communicate information.<sup>35</sup> Another capability include *Affiliation* which facilitate the ability to participate in community life, both offline and online. Lastly, Nassbaum speaks of *control over one's environment* as another capability which should enhance political participation and protection of personal data. Suffice therefore to say that, the global south needs to factor in these capabilities in their digital policy in order to create digital justice but will allow citizens of developing countries to lead meaningful life by using technology meaningfully. In this sense, Nussbaum's inquisition is intriguing to us as she questions '*what is each person able to do and to be?*'<sup>36</sup> As we propose for an African digital policy framework, we want recapture the nussbaumian inquisitive mind as follows: '*What are African citizens actually able to do and to be with digital technologies?*' First, this question calls for the meaningful use of

33 Ivan Illich, *Tools for Conviviality* (London: Calder & Boyars, 1973), 21.

34 Ivan Illich, *Tools for Conviviality*, 24.

35 Martha C. Nussbaum, *Creating Capabilities: The Human Development Approach* (Cambridge, MA: Belknap Press of Harvard University Press, 2011), 33–34.

36 Nussbaum, *Creating Capabilities*, 18.

Western technologies by Africans. This insinuates that it is not enough that African citizens have access to technology but they must be able to use that access to improve their lives in ways they have reason to value. Secondly, the question calls for true development. In this sense, Nussbaum echoes that true development is a matter of enabling people to function in ways they have reason to value.<sup>37</sup> To this end, digital policies for developing countries must outline how imported technologies should have the ability to embrace the local reality content. Such technology will be able to provide the citizens of developing countries some real opportunities to achieve valued functionings. Technology should empower choices by allowing individuals to decide how, when, and whether to use it. It is for this reason that Nussbaum observed that capabilities protect the choice to function or not to function; they leave room for freedom.<sup>38</sup>

Conclusively, the introduction of the *capabilities-based African digital policy framework* is going to allow for the alignment of Western Technologies with human dignity and true development. This alignment will ensure that citizens have the freedom to choose how to engage with technology. Additionally, technology will become a tool for expanding life possibilities rather than reinforcing inequalities. Thus, it is clear that by grounding African digital equity in Nussbaum's framework, policymakers can ensure that technology serves people, rather than people serving technology.

### *Inculcating Digital Responsibility in Developing Nations*

As it stands, it appears that Africa's digital expansion through smart technologies, surveillance systems is by large advancing without fully considering or accounting for long-term risks such as Data sovereignty loss through foreign-controlled platforms, Algorithmic bias misrepresenting African contexts, and Cultural erosion from dominance of foreign epistemologies. In this section of our reflection, we therefore, wish to tap into the insights of Hans Jonas's concept of *The Imperative of Responsibility* to propose a durable solution to safeguard the future generations and the environment against such risks that continent of Africa is exposed to.

Hans Jonas' most celebrated moral principle is the imperative that as a person, you ought to: 'Act so that the effects of your action are compatible with the permanence of genuine human life'.<sup>39</sup> When we reflect on the deployment and usage of technology under the spectrum of this imperative, it appears that there is a need for a moral responsibility to future generations which demands that technology be developed and deployed in ways that sustain humanity and nature over the long term. In order to realise this moral responsibility, African Nations will need to conduct a comprehensive ethical and societal impact assessments before adopting foreign technologies. In furtherance to this, African Nations will need to invest in local technological expertise to reduce long-term dependency. Finally, there is a need to establish legal protections for African control over data generated within the continent.

Additionally, Hans Jonas is calling Africans to exercise what he called the precautionary principle which states that '*In dubio pro malo*', to mean that when 'in doubt, err on the side of the worst-case scenario'. Therefore, similarly, African can adopt this principle as their *fil conducteur* to emphasise and show case their ethical caution in the face of uncertain but potentially catastrophic consequences of modern technologies. This precautionary principle can inform an African inter-generational consciousness so that we (Africans) can able acclaim: when we (African Nations)

37 Nussbaum, *Creating Capabilities*, 33.

38 Nussbaum, *Creating Capabilities*, 25.

39 Hans Jonas, *The Imperative of Responsibility: In Search of an Ethics for the Technological Age* (Chicago: University of Chicago Press, 1984), 11.

are unsure about the long-term effects of a powerful technology, and if those effects could harm humanity or nature significantly, then we (African Nation) have a moral duty to avoid or delay deploying that technology until its safety is clear!

By institutionalising this precautionary principle and extending responsibility to future generations, African policymakers can align technological growth with sustainability, autonomy, and cultural integrity.

### *African Philosophy: A Normative Framework for Re-centering Technology Within Indigenous Epistemologies*

Suffice to note that the reflection on technological hegemony in the Global South cannot be fully analysed without situating it within African philosophical thought. In particular, African philosophies emphasise relationality, communal knowledge production, moral responsibility, and harmony between human beings and their environment. John Mbiti, captures this in his philosophical concept of Ubuntu which is a moral and ontological framework which says whatever happens to the individual happens to the whole group, and whatever happens to the whole group happens to the individual. The individual can only say I am, because we are; and since we are, therefore I am.<sup>40</sup> In the same line of thought of relationality and communal interdependence, Gyekye discusses the Akan proverb as he echoes that a person is not a palm tree that he/she should be self-sufficient.<sup>41</sup> All these African thoughts illustrate the argument that relationality, interdependence, and communal cooperation and knowledge are central to African philosophical conceptions of personhood and moral responsibility. However, the dominance of Western technological systems, which often prioritise efficiency, data extraction, and algorithmic decision-making, risks undermining this communal epistemology by privileging abstract, decontextualised forms of knowledge over lived, relational experience.

African epistemologies are historically grounded in oral traditions, experiential learning, and localised knowledge practices. However, digital infrastructures that are largely designed within Western contexts tend to validate only those forms of knowledge that conform to written, codified, and globally standardised formats which renders invisible alternative ways of knowing in Africa, thereby contributing to the erosion of epistemic diversity.

In addition, African philosophical traditions place significant emphasis on harmony with nature. As such, the uncritical adoption of extractive technological systems (like digital capitalism) in the Global South stands in direct tension with African ethical philosophy, which is grounded in relationality, balance, and ecological harmony. As Mogobe Ramose argues, the universe is a complex wholeness involving the multi-layered and incessant interaction of all entities.<sup>42</sup> Within this framework, technologies that prioritise data extraction, commodification, and instrumental efficiency disrupt this ontological balance, reducing both human beings and their environments to resources, and thereby reinforcing processes of technological epistemicide and ecological dislocation. In light of the foregoing analysis, it appears that the integration of African philosophical perspectives on technology offers a more holistic and contextually grounded framework for critiquing technological hegemony. By re-centering indigenous knowledge systems, African philosophy offers a normative framework for reimagining technology in ways that promote human dignity and inclusive development.

40 Mbiti, John, *African religions and philosophy* (Heinemann: 1969) 108-109.

41 Gyekye Kwame, *Tradition and Modernity: Philosophical Reflections on the African Experience* (Oxford: University Press, 1997), 31-32.

42 Mogobe B. Ramose, *African Philosophy through Ubuntu* (Harare: Mond Books, 1999), 155.

## Conclusion

In conclusion, suffice to note that the future of technology in the Global South must not be one of passive consumption or uncritical adoption, but of ethical discernment and epistemic self-determination. If technology is allowed to remain hegemonic and unchecked, it risks deepening inequality, dehumanisation, and epistemic erasure. However, if reimagined through robust philosophical and ethical frameworks, technology can be reclaimed as a tool that serves human dignity rather than subjugates it. The task before African societies, policymakers, and scholars is therefore not to reject technology, but to humanise it so that technological progress remains accountable to the moral, cultural, and epistemic values that define authentic human flourishing.

### Contact

***Chileshe Mulenga Nicholas, MA***

Cavendish University Zambia  
Faculty of Art, Education and Social Science  
Corner of and Elizabeth, Great N Rd, Lusaka, Zambia  
cmulenga@cavendish.co.zm

***Dr. David Mutemwa***

Cavendish University Zambia  
Faculty of Art, Education and Social Science  
Corner of and Elizabeth, Great N Rd, Lusaka, Zambia  
dmutemwa@cavendish.co.zm

## Recenze

### **Pavel Hošek, *Jako anděl s polámanými křídly. Duchovní profil Karla Kryla*, Brno: Centrum pro studium demokracie a kultury, 2025, 220 stran, ISBN: 978-80-7325-607-4**

Nakladatelství CDK vydalo poslední knihu prof. Pavla Hoška, religionisty z ETF UK, *Jako anděl s polámanými křídly. Duchovní profil Karla Kryla*. Jsem filosof výchovy. Proto hned na začátku této recenze přiznávám, že neumím číst knihy jinak než pedagogickým prizmatem. Budu se tedy v tomto textu dotýkat otázek formování osobnosti, výchovy k pravdě a charakteru. Hoškova kniha si to navíc žádá sama: autor totiž nechte Kryla pouze jako rebela s kytarou, ale jako muže, který svými písněmi i životem formoval druhé – často nevědomky – po celé generace.

Pavel Hošek si hned v úvodu klade otázku, proč Kryl stále přitahuje mladé lidi, kteří nepamatují srpen 1968 ani listopad 1989, a přesto si jeho písně poslechnou i zazpívají. Tato otázka není banální: spousta autorů, kteří psali a zpívali v atmosféře normalizace, upadla do zapomnění. Krylův hlas však přetrval. Odpověď, kterou Hošek nabízí, zní: protože jeho dílo má duchovní rozměr, který překračuje hranice dějin a politických kontextů. Proto i Hoškova kniha není ani hudební studií, ani klasickou biografií. Spíše bych ji nazval teologicko-literární esejí o smyslu Krylova díla. Metoda, kterou Hošek zvolil, je religionistická: ukazuje Kryla jako básníka, který byl inspirován biblickými příběhy, prorockými obrazy i duchovní tradicí Evropy. Čtenář dostává do ruky text, který se opírá o odbornou literaturu (čteme odkazy na Assmanna, Webera, Ricoeura aj.), ale přesto zůstává přístupný a čtivý. Někde působí až osobně: Hošek mluví o tom, jak se v jeho vlastní rodině zpívaly Krylovy „žalmy“ – a tím propojuje akademickou erudici s osobním zaujetím.

Ústřední metafora knihy, obsažená již v názvu, je výstižná. „Anděl s polámanými křídly“ není bytost triumfu, ale symbol posla, který navzdory slabosti „nese zprávu“. Je to obraz, který můžeme číst mnoha způsoby. V pedagogické perspektivě je to připomínka, že vychovatel nemusí být dokonalý, aby byl věrohodný. Učitel, rodič či mentor může být sám zraněný, unavený, „polámaný“, a přesto může vést k pravdě. V tom je Kryl inspirativní. Byl nedokonalý: hádavý, provokativní, „půlkacíř určený“, jak sám sebe nazýval, často ztrácel sympatie. A přece zůstal věrný svému poslání. Hošek tuto ambivalenci neschovává. Připomíná, že Kryl nebyl žádným svatým hrdinou, ale člověkem s ostrými hranami. A právě v tom je jeho síla. Výchova totiž není předávání dokonalých vzorců, nýbrž ukazování, že i v nedokonalosti může být věrnost pravdě.

Kniha má několik tematických bloků. Jeden z nejzajímavějších je ten, v němž Hošek sleduje Krylovo čtení Bible. Kapitoly s názvy jako „Žalmy, modlitby básníků“ nebo „Bratrovrah Kain“ ukazují, jak hluboce se biblické obrazy propály do Krylova básnického jazyka. Jeho písně jsou moderními žalmy, někdy stížnostmi proti bezpráví, jindy modlitbami za svobodu. Kryl dokázal biblickou

poetiku aktualizovat: apokalyptické obrazy, které v jeho písničkách nacházíme, jsou zároveň obrazem komunistického útlaku i varováním před každou podobou lži.

Hošek zároveň pečlivě připomíná, že prorok není především věstec budoucnosti, ale ten, kdo „odhaluje modlářství“, „zastává se lidí na okraji“ a „varuje“. Kryl touto optikou vystupuje jako básník-prorok, který odmítal pohodlné kompromisy. To jej činilo v exilu jedinečným a doma po roce 1989 často nepohodlným. Zůstal hlasem, který se těžko začleňoval do nových pořádků, protože příliš hlasitě pojmenovával jejich slepá místa.

Pro mě jako filosofa výchovy je cenné, že Hošek ukazuje Kryla jako svého druhu pedagoga. Nikdy nezasedl za učitelskou katedru, a přesto formoval charakter tisíců. Jeho písničky lze chápat jako „kurikulum pro duši“ – krátké lekce o odvaze, pravdě a odpovědnosti. Od Žalmů přes Kaina a Ábela až po Apokalypsu. Ať vědomě či nevědomě, jeho poezie zrcadlila základní narativ dějin spásy: boj světla s temnotou, volbu mezi pravdou a lží, životem a smrtí. Bez moralizování světský bard-prorok svou písničkou suploval roli, již by v ideální společnosti měly sehrát školy, instituce a církve: vést lidi k pravdě a odpovědnosti. Kryl se ovšem nebál vyslovit k aktuálním tématům bez veršů a bez kytary. Možná právě výroky jako tento jej pro mnohé činily po r. 1989 nepohodlným „vychovatelem“:

„Moc bych doporučoval nevychovávat děti k tomu věčařství, abychom totiž nepřeválcovali jeden bolševismus druhým bolševismem. Spousta zbytečných krámů nahrazuje dosavadní hodnoty. Například elektronické hračky pro děti, elektronické hry, kdy skákal panáček přes jiné panáčky. Děti u nich tráví sedm, osm i devět hodin, ničí si oči, ničí si duši.“

Co chtěl Hošek svou knihou říct? Především to, že Krylovo dílo je třeba číst duchovním interpretačním klíčem. Nejde jen o písničky jedné generace, ale o texty, které se dotýkají základních otázek lidské existence. Kryl je tím andělem s polámanými křídly: zraněný, z vlastní země vyhnaný, ne vždy pochopený, a přece věrný svému poslání. To je obraz, který se nehodí do žádného triumfálního patosu, ale právě proto je pravdivý a přesvědčivý.

Hošek také ukazuje, že Kryl není jen symbolem „odporu“ proti jedné epoše. Je to básník, jehož jazyk a obrazy mají sílu oslovovat i dnes, v době, kdy se možná potýkáme s jinými hrozbami – relativizací pravdy, relativizací hodnot, krizí charakteru, krizí smyslu. V tom spočívá aktuálnost knihy: ne v nostalgii, ale v nabídce duchovní orientace.

Závěrem: *Jako anděl s polámanými křídly* není hagiografie ani definitivní portrét. Je to religionistovo pozvání k rozhovoru – se samotným Krylem, s jeho dobou, ale i s námi. Hošek nechce Kryla idealizovat, ale ukazuje, že i hlas „uříčeného půlkacíře“ může být prorocký.

Jan Hábl  
(jan.habl@uhk.cz)

## Caritas et veritas

### Časopis pro reflexi křesťanských souvislostí v sociálních a humanitních oborech

Cílem časopisu je publikovat původní odborné a populární články specialistů pracujících v těchto oblastech a představovat důstojnou platformu pro komunikaci o interakci v uvedených směrech. Časopis je zařazen do databáze Scopus a do Seznamu recenzovaných neimpaktovaných periodik vydávaných v České republice.

Časopis Caritas et veritas se v rámci svého zaměření na křesťanské souvislosti v humanitních a sociálních oborech věnuje zejména praktickým otázkám spojeným s etikou, pomáhajícími profesemi a pedagogikou. Proto je záměrem redakce zachovat celý časopis dobře přístupný pro odborníky z praxe v Česku a na Slovensku. Odborné a popularizační části časopisu, stejně jako recenze na česky a slovensky vydané publikace, proto vycházejí v češtině. Zároveň redakce usiluje o to, aby odborné studie publikované v časopise zohledňovaly mezinárodní diskurz a byly pro něj přístupné. Editorial a vědecké studie proto vycházejí také v anglickém překladu, resp. odborné studie napsané původně v angličtině nebo jiném světovém jazyce jsou takto i publikovány.

#### vydavatel:

Teologická fakulta  
Jihočeské univerzity v Českých Budějovicích  
číslo a ročník: 1 (2026)  
předplatné: zdarma, volně přístupné

#### kontaktní adresa:

Caritas et veritas  
Teologická fakulta JU  
Kněžská 8  
370 01 České Budějovice  
Tel. +420 387 773 501  
Fax +420 386 354 994  
e-mail: cetv@tf.jcu.cz  
www.caritasetveritas.cz

#### objednávky pro zasílání mailem:

cetv@tf.jcu.cz

#### design a layout:

Ing. František Ettler  
info@ettler.net

**redakční rada**

**Dr. Daniela Blank**, *danielablank@mail.de*

**Doc. Mgr. David Bouma, Ph.D.**, *PdF UHK, Rokitanského 62, 500 03 Hradec Králové III, david.bouma@uhk.cz*

**Dr. Rainer Gehrig**, *Diecézní úřad Odenwald-Tauber, Kirchenstraße 11, 74722 Buchen-Hainstadt, Německo, rainergehrig5@gmail.com*

**Dr. Lyudmyla Ivanyuk**, *Faculty of Foreign Philology, Lesya Ukrainka Volyn National University, Volia Av. 13, 43025 Lutsk, Ukraine, lyudmyla.iv@vnu.edu.ua*

**Mgr. Bc. Jan Kaňák, Ph.D.**, *FF ZČU, Sedláčkova 38, 301 00 Plzeň, honzaka@ff.zcu.cz*

**David Mutemwa, Ph.D.**, *Cavendish University Zambia, Lusaka, dmutemwa@hotmail.com*

**Josef Nota, Ph.D.**, *TF JU, České Budějovice, Kněžská 8, 370 01 České Budějovice, jnota@tf.jcu.cz*

**Doc. Michal Opatrný, Dr. Theol**, *TF JU, České Budějovice, Kněžská 8, 370 01 České Budějovice, mopatrný@tf.jcu.cz*

**Doc. Dominik Opatrný, Ph.D.**, *CMTF UP, Univerzitní 244/22, 779 00 Olomouc, dominik.opatrný@upol.cz*

**Prof. PhDr. Mgr. Petra Potměšilová, Ph.D.**, *CMTF UP, Univerzitní 244/22, 779 00 Olomouc, petra.potmesilova@upol.cz*

**Mgr. Karel Šimr, Ph.D.**, *TF JU, České Budějovice, Kněžská 8, 370 01 České Budějovice, simr@tf.jcu.cz*

**Prof. Dr. Monique van Dijk-Groeneboer**, *Faculteit Katholieke Theologie, Universiteit van Tilburg Nieuwegracht 61 Utrecht, M.C.H.vanDijk@tilburguniversity.edu*

**Prof. Dr. Elaine R. Wright**, *Brescia University, Marilyn Younger Conley School of Social Work, Owensboro 717 Frederica Street, Owensboro, KY, USA, elaine.wright@brescia.edu*

**redakce****výkonná redaktorka**

Mgr. Markéta Kropíková

Katedra sociální a charitativní práce

Teologická fakulta, Jihočeská univerzita v Českých Budějovicích

kropikova@tf.jcu.cz

**koeditor čísla**

Daniel D. Novotný, Ph.D.

Katedra filosofie a religionistiky

Teologická fakulta, Jihočeská univerzita v Českých Budějovicích

novotnyd@tf.jcu.cz

Mgr. Chileshe Mulenga Nicholas

Faculty of Art, Education and Social Science, Cavendish University Zambia

cmulenga@cavendish.co.zm

**předseda redakční rady**

doc. Michal Opatrný, Dr. theol.

Katedra sociální a charitativní práce

Teologická fakulta, Jihočeská univerzita v Českých Budějovicích

mopatrný@tf.jcu.cz

+420 389033542

č. dv. 206 b

**česká a anglická korektura**

Bc. Jana Veselá, Mgr. Maxwell Ogbuagu

## Caritas et veritas

**A journal for Christian reflections in the context of the social sciences and humanities**

The aim of the journal is to publish original scholarly and popular articles written by specialists working in these areas and to provide a quality platform for communication about the interaction between these fields of study. The journal is listed in the database Scopus and is on the list of peer-reviewed non-impacted periodicals published in the Czech Republic.

Within its orientation on Christian reflections in the context of the social sciences and humanities the journal Caritas et veritas is devoted primarily to practical matters related to ethics, the assisting professions, and pedagogy. This is why it is the editorial board's aim to keep the entire journal easily accessible for practitioners in the Czech Republic and Slovakia. The scholarly and popular sections of the journal as well as reviews of publications in the Czech and Slovak languages are therefore published in Czech. At the same time the editorial board strives to ensure that the scholarly studies published in the journal take account of international discourse and are accessible to it. The editorial and scholarly studies are therefore published also in English translation, and scholarly studies written originally in English or another world language are also published in this way.

### **publisher:**

Faculty of Theology  
University of South Bohemia  
České Budějovice  
issue & year: 1 (2026)  
price: free of charge, Open Access

### **contact address:**

Caritas et veritas  
Faculty of Theology  
University of South Bohemia  
České Budějovice  
Kněžská 8  
370 01 České Budějovice  
Tel. +420 387 773 501  
Fax +420 386 354 994  
e-mail: [cetv@tf.jcu.cz](mailto:cetv@tf.jcu.cz)  
[www.caritasetveritas.cz](http://www.caritasetveritas.cz)

### **orders for email delivery:**

[cetv@tf.jcu.cz](mailto:cetv@tf.jcu.cz)

### **design and layout:**

František Ettler, MSc.  
[info@ettler.net](mailto:info@ettler.net)

**editorial board:**

**Dr Daniela Blank**, *danielablank@mail.de*

**Dr David Bouma**, *Faculty of Education, University of Hradec Králové, Rokitsanského 62, 500 03 Hradec Králové III, Czech Republic, david.bouma@uhk.cz*

**Dr Rainer Gehrig**, *Diözesanstelle Odenwald-Tauber, Kirchenstraße 11, 74722 Buchen-Hainstadt, Germany, rainergehrig5@gmail.com*

**Dr Lyudmyla Ivanyuk**, *Faculty of Foreign Philology, Lesya Ukrainka Volyn National University, Volia Av. 13, 43025 Lutsk, Ukraine, lyudmyla.iv@vnu.edu.ua*

**Dr Jan Kaňák**, *Faculty of Arts, University of West Bohemia, Sedláčkova 38, 301 00 Plzeň, Czech Republic, honzaka@ff.zcu.cz*

**Dr David Mutemwa**, *Cavendish University Zambia, Lusaka, dmutemwa@hotmail.com*

**Dr Josef Nota**, *Faculty of Theology, University of South Bohemia in České Budějovice, Kněžská 8, 370 01, jnota@tf.jcu.cz*

**Assoc. Prof. Dr Michal Opatrný**, *Faculty of Theology, University of South Bohemia in České Budějovice, Kněžská 8, 370 01, mopatrný@tf.jcu.cz*

**Assoc. Prof. Dr Dominik Opatrný**, *Sts Cyril and Methodius Faculty of Theology, Palacký University Olomouc, Univerzitní 244/22, 779 00 Olomouc, dominik.opatrný@upol.cz*

**Prof. Dr Petra Potměšilová**, *Sts Cyril and Methodius Faculty of Theology, Palacký University Olomouc, Univerzitní 244/22, 779 00 Olomouc, petra.potmesilova@upol.cz*

**Dr Karel Šimr**, *Faculty of Theology, University of South Bohemia in České Budějovice, Kněžská 8, 370 01, simr@tf.jcu.cz*

**Prof. Dr Monique van Dijk-Groeneboer**, *Faculteit Katholieke Theologie, Universiteit van Tilburg, Nieuwegracht 61 Utrecht, M.C.H.vanDijk@tilburguniversity.edu*

**Prof. Dr Elaine R. Wright**, *Brescia University, Marilyn Younger Conley School of Social Work, Owensboro 717 Frederica Street, Owensboro, KY, USA, elaine.wright@brescia.edu*

**executive editor**

Markéta Kropíková MA

Department of Social and Charity Work

Faculty of Theology, University of South Bohemia České Budějovice

kropikova@tf.jcu.cz

**co-editor of issue**

Dr. Daniel D. Novotný

Department of Philosophy and Religious Studies

Faculty of Theology, University of South Bohemia in České Budějovice

novotnyd@tf.jcu.cz

Chileshe Mulenga Nicholas, MA

Faculty of Art, Education and Social Science, Cavendish University Zambia

cmulenga@cavendish.co.zm

**chairman of the editorial board**

Assoc. Prof. Dr Michal Opatrný

Department of Social and Charity Work

Faculty of Theology University of South Bohemia České Budějovice

mopatrný@tf.jcu.cz

+420 389 033 542

**Czech and English proofreading**

Jana Veselá BA, Maxwell Ogbuagu MA