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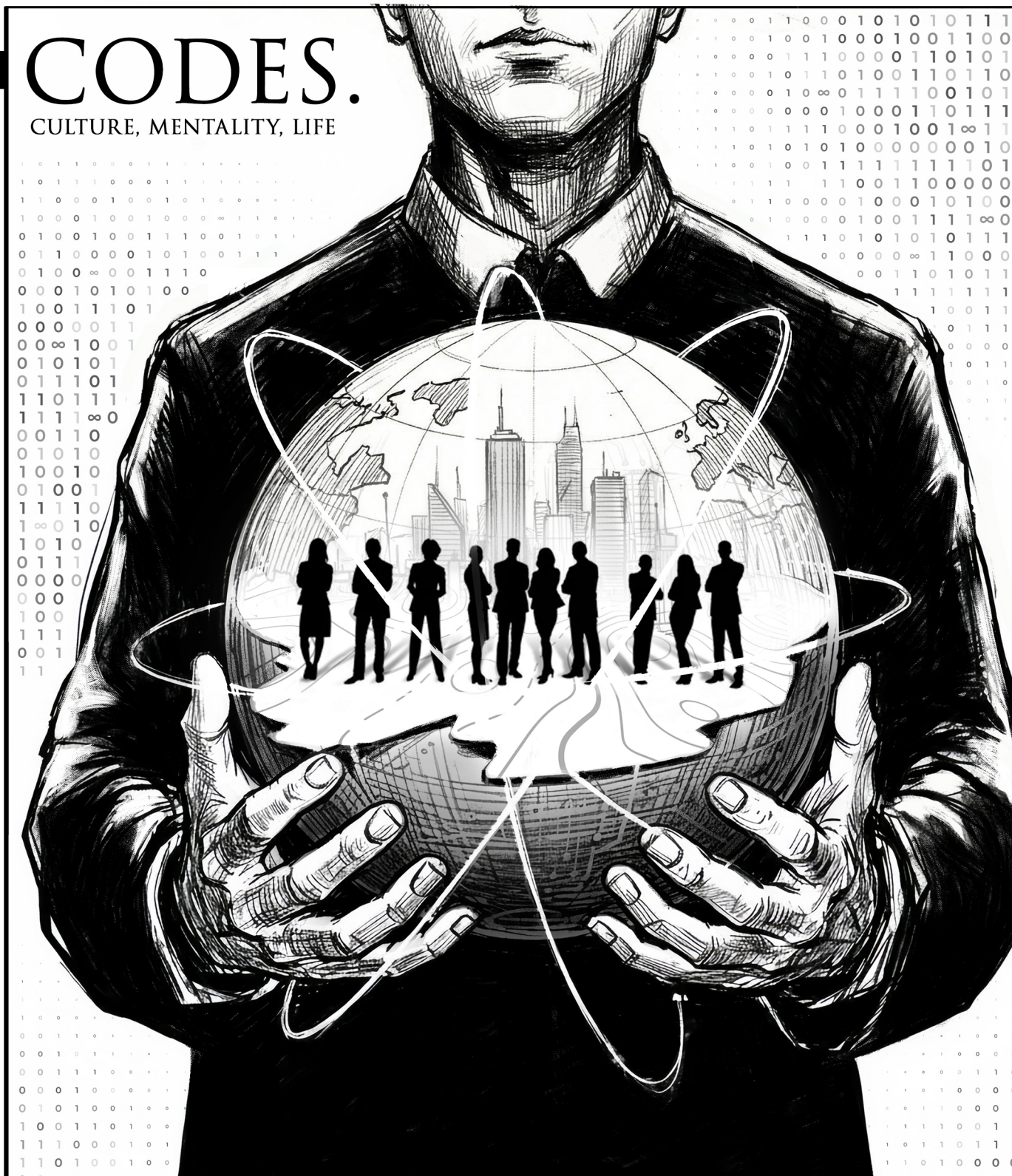
IN SOCIOLOGY, CRIMINOLOGY, PHILOSOPHY AND POLITICAL SCIENCE

CODES.

CULTURE, MENTALITY, LIFE



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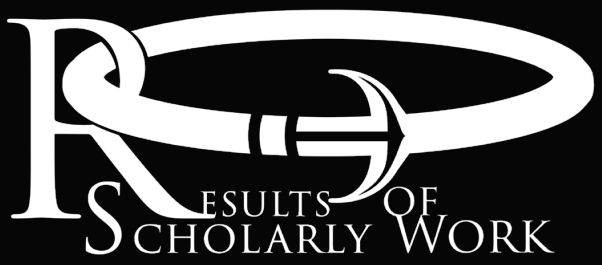

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We are deeply grateful to everyone who contributed to this issue, including the members of the editorial board, peer reviewers, layout designers, conceptual contributors, and, of course, authors.

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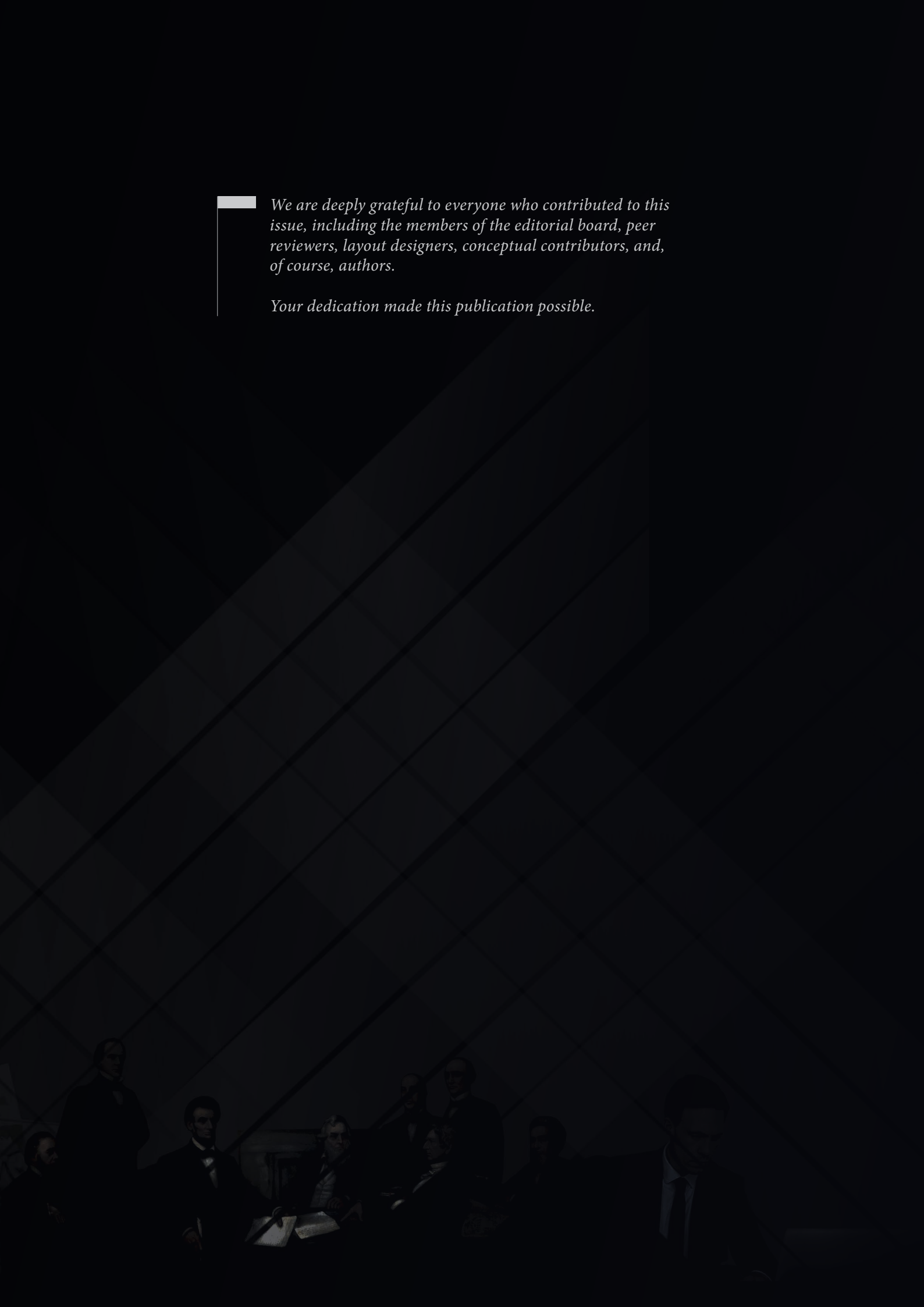


DR. VADYM PALAHUTA

Ph.D. in Philosophy, Professor, Professor of the Department of Philosophy and Pedagogy of the National University of Technology.

DR. LUCIEN OULAHBIB

He is a french thinker, author, sociologist, and political philosopher who teaches in Lyon, France. In past he was a host at radio Paris 80 and was a reporter, also Lucien Oulahbib was an editor of Magazine Sans Nom, Citizen K. and Technikart, and worked as a freelance journalist for Esprit Critique, Dogma, Marianne and Tumulte.

DR. ANDREAS MARKANTONATOS

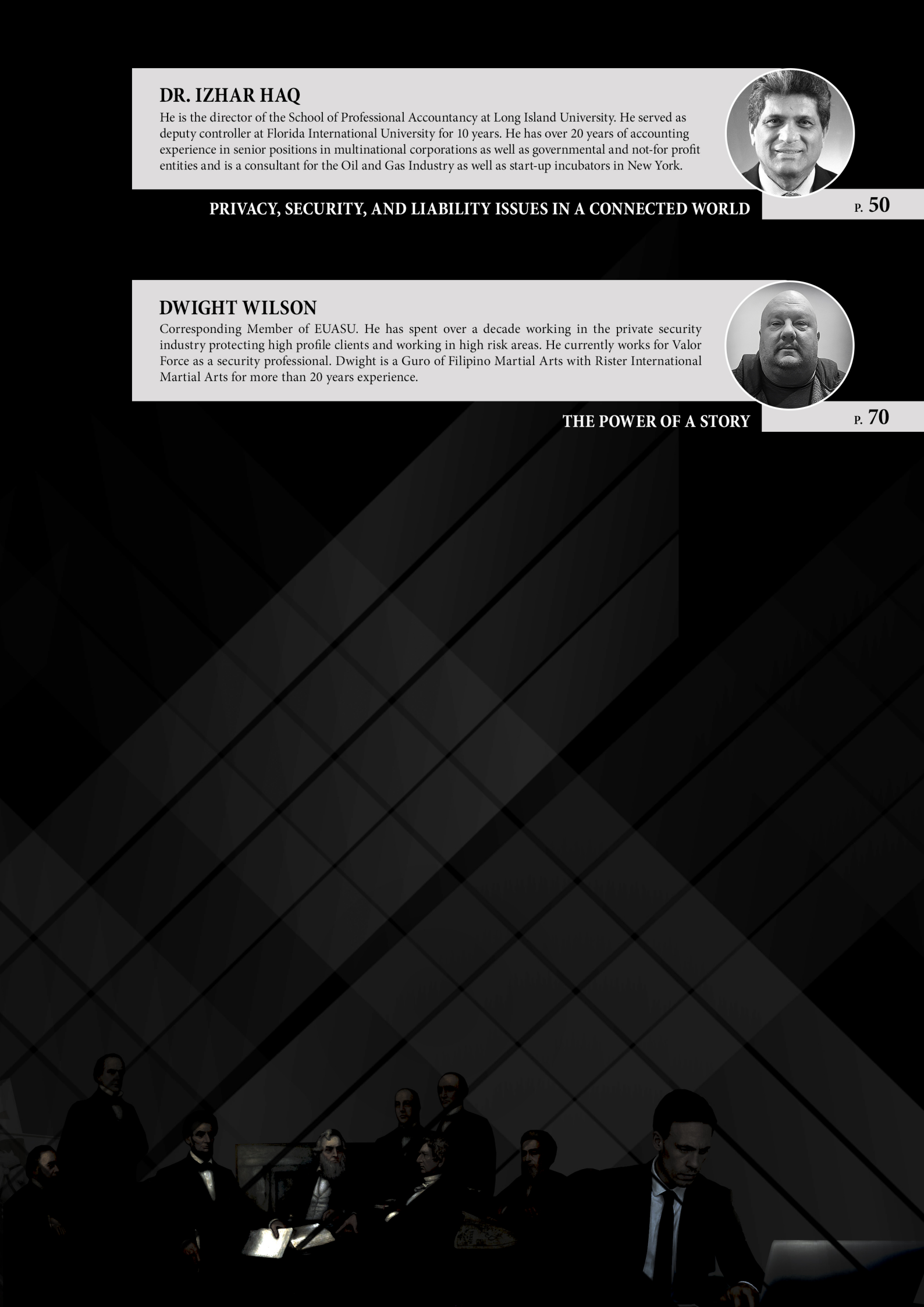
Andreas Markantonatos is a leading scholar of ancient Greek Literature, internationally distinguished for his contributions to the study of Attic drama, narratology, and the intellectual history of Greek myth and religion.

DR. IZHAR HAQ

He is the director of the School of Professional Accountancy at Long Island University. He served as deputy controller at Florida International University for 10 years. He has over 20 years of accounting experience in senior positions in multinational corporations as well as governmental and not-for profit entities and is a consultant for the Oil and Gas Industry as well as start-up incubators in New York.

DWIGHT WILSON

Corresponding Member of EUASU. He has spent over a decade working in the private security industry protecting high profile clients and working in high risk areas. He currently works for Valor Force as a security professional. Dwight is a Guro of Filipino Martial Arts with Rister International Martial Arts for more than 20 years experience.



STATE OF EXCEPTION AS A LEGAL DISPOSITIVE OF MODERN

BIOPOLITICS

DR. VADYM PALAHUTA

NATIONAL UNIVERSITY OF TECHNOLOGY

- ORCID: https://orcid.org/0000-0003-4254-1625
- Email: palaguta@ua.fm

Vadim Palahuta is a Ph.D. in Philosophy, Professor, Professor of the Department of Philosophy and Pedagogy of the National University of Technology.

ABSTRACT

In recent decades, the problem of biopolitics has occupied one of the central positions in contemporary social and political philosophy. Beginning with the works of M. Foucault, biopolitics has been understood as a specific form of power oriented not so much toward territory or the legal status of the subject as toward the governance of the life of the population in all its biological, social, and cultural dimensions. Within this approach, political power increasingly manifests itself as power over life, corporeality, health, reproduction, and mortality. A phenomenon of particular significance within the structure of biopolitical governance is the state of emergency. Whereas in the classical legal tradition the state of emergency was understood as a temporary and exceptional measure aimed at restoring a disrupted order, under conditions of late modernity and contemporary digital society it gradually loses its temporary character. The state of emergency increasingly functions as a stable paradigm of governance, within which the suspension of legal norms becomes not an exception but a norm of the political practice of modern sovereign power. The theoretical comprehension of this process is associated with the works of G. Agamben, C. Schmitt, R. Esposito, S. Žižek, A. Mbembe, R. Braidotti, W. Watkin, and other scholars, who point to the systemic nature of the interrelation between sovereign power, biopolitics, and the state of emergency. Their works emphasize that contemporary politics increasingly operates within a space of legal indeterminacy, where the boundaries between law and its suspension, between norm and exception, become blurred. An additional factor in the radicalization of biopolitical mechanisms is the rapid digitalization of social processes. The development of surveillance technologies, big data analytics, algorithmic governance, and artificial intelligence significantly expands the capacities of power to control and regulate the population. Digital society produces new forms of the biopolitical body, in which physical and social corporeality are supplemented by virtual and informational dimensions subject to continuous monitoring and controlling interventions. In this context, the analysis of the relationship between biopolitics and thanatopolitics acquires particular relevance. The governance of life is increasingly intertwined with the institutionalized possibility of exclusion, social annihilation, or physical elimination of individual subjects and entire population groups. The concept of necropolitics proposed by A. Mbembe makes it possible to capture the extreme forms of biopolitical rationality in which power is exercised through the production of «death-worlds» and the transformation of populations into a governable biomaterial.

Keywords

biopolitics, Exception, biopower, individual, thanatopolitics, necropolitics, subjectivity, population, biomass, Digital Camp

INTRODUCTION

The rapid development of globalization processes worldwide, against the backdrop of the continuation of a horrific war on the territory of the Ukrainian state and local military

conflicts in various parts of the world, exacerbates the issue of protecting ordinary citizens from governmental intentions and actions that extend far beyond the legal guarantees and obligations of state power toward civil society. The study of works by renowned philosophers and contemporary scholars reveals deep genealogical origins of the current position of ordinary individuals in societies of not only Western but also Eastern type, which are vividly confirmed by compelling evidence. This fully applies to the unsatisfactory state of ensuring constitutional civil rights and freedoms in contemporary societies; moreover, it is hardly necessary to further emphasize the Ukrainian context, where the dominance of arbitrariness and the excessive expansion of governmental powers are increasingly becoming the norm, leading to a condition of anomie in its pure form. There exists an objective state of affairs that has a long history of emergence and subsequent formation and therefore requires thorough and careful scholarly investigation.

In addressing this complex problem, one of the most influential approaches among scholars is considered to be the biopolitical research strategy. According to the established viewpoint, biopolitics is understood as a mode of governance in which the primary and most fundamental task of the government of any state is the welfare and enrichment of the population as its central concern. It is well known that eighteenth-century Europe marks the beginning of a historical period in which state power prioritizes the role of the population both as a resource of the state and as a homogeneous biomass. In comparison with earlier historical periods, the concept of the population acquires an entirely different meaning. It is precisely at this moment that a mass conception of the human being is accentuated: individuals are no longer individualized but rather massified, which necessitates the development of new technologies for governing this population of individuals at the level of the state. This perspective on society as a biopolitical space was developed in the works, articles, interviews, and lectures of the French philosopher Michel Foucault during the 1970s. In particular, his lectures at the Collège de France are devoted to this problematics, above all the lectures delivered in 1978–1979 under the title *The Birth of Biopolitics*, in which the problem of political and social knowledge is formulated in the context of such a modern European nation-state formation as the population, and the mechanisms of its governance, control, and regulation are elaborated. This perspective is currently the most influential within the social sciences and humanities scholarly community. Therefore, it is probably not accidental that as early as 2004 in Chicago, the biopolitical analyses of power proposed by Michel Foucault were acknowledged at a meeting of the American Political Science Association (Laurette & Walsh, 2011, p. 2).

However, in the present context there already exist no less influential concepts of biopolitics that expand or transform Michel Foucault's conception of biopolitics. In particular, these include, first and foremost, the concept of biopolitics developed by Giorgio Agamben (Agamben, 2005), as well as the biopolitical concepts of Roberto Esposito (Esposito, 2008), Antonio Negri and Michael Hardt (Hardt & Negri, 2005, 2025) and the concept of necropolitics proposed by Achille Mbembe (Mbembe, 2019). Therefore, within the framework of the topic of this article — namely, states of emergency or situations that suspend or completely deprive ordinary individuals of their rights and freedoms in contemporary society — we shall consider, alongside the conceptual positions of Michel Foucault, the most significant aspects of the concepts advanced by contemporary scholars of biopower.

ANALYSIS OF RECENT RESEARCH

For a considerable period of time, social sciences and humanities research conducted by scholars from various fields has focused its attention on the biopolitical strategy of development both at the level of individual states and at the level of global geopolitical strategy, which is acquiring new content and expanding through the widespread implementation of digitalization. The most acute problem of contemporary biopolitics is the relationship between political power decisions and the legal guarantees afforded to ordinary citizens. This aspect has been addressed in the works of well-known scholars, including, in various forms, the oeuvre of M. Foucault, as well as in the works of G. Agamben, W. Watkin, R. Esposito, M.Hardt and A. Negri, J. Alemán, A. Mbembe, Sh. Zuboff, S.Žižek, G. Cain, and other contemporary scholars and researchers.

METHODS

The examination of the stated topic of the article necessitates the use of a wide range of contemporary social sciences and humanities methods that

fully correspond to the interdisciplinary orientation of the research. Accordingly, the following methods were employed in the analysis of the topic: the genealogical method (genealogy) and philosophical hermeneutics as a method for uncovering latent meanings; the comparative method; the paradigmatic method as a means of revealing the immanent logic of the relationship between political and legal systems; linguistic and etymological methods of analysis, in particular methods of critical analysis of terminology and established concepts; and the critique of the subject as a construct of Power–Knowledge.

PURPOSE

The main theoretical objective of the article is to examine the transformation of the principles of biopower under contemporary conditions. In particular, the state of emergency is analyzed as a partial or complete suspension of legal guarantees, that is, as an already permanently operative norm for ordinary individuals. A preliminary assessment is offered of the prospects for the institutionalization of the state of emergency as a long-term dispositif of contemporary power, not only at the level of individual states but also at the level of the international community.

RESULTS

As a result of the conducted philosophical and theoretical analysis, it has been established that the state of emergency in contemporary Western societies has lost its status as a temporary and exceptional measure and has transformed into a stable, structure-forming paradigm of biopolitical governance. The state of emergency functions not as a legal casus, but as a normalized mechanism of regulating the life of the population, embedded in the logic of modern biopower.

It has been identified that the historical evolution of technologies of power –from practices of exclusion, disciplinary techniques, and panoptic surveillance to technologies of security — is accompanied by a shift in the focus of governance from the individual body to the management of the population as a biomass. At the same time, disciplinary and sovereign forms of power do not disappear but are integrated into more complex biopolitical configurations, reinforcing one another under conditions of the state of emergency. It has been established that biopolitics, in its structural foundation, inevitably contains a thanatopolitical dimension. Control over life presupposes the possibility of making decisions concerning the admissibility of death — both physical and social and political. In this context, the state of emergency functions as a key mechanism for legitimizing the suspension of legal guarantees and transferring the population into a zone of legal indeterminacy or emptiness, where the boundaries between norm and exception lose their clarity.

Under conditions of a permanent state of emergency, a systemic erosion of individual subjectivity takes place. The contemporary individual is increasingly regarded not as a political subject, but as an object of governance and manipulation by neoliberal ideology and the mass media under its control, as a statistical unit and as an element of a biosocial mass. This process is accompanied by the loss of the possibilities of parrhesia, that is, the right to free, responsible, and sufficiently risky truth-telling in relation to power within the framework of the legal order.

It has been identified that digitalization and mediatization radically expand the instrumental repertoire of biopower, ensuring continuous monitoring, prediction, and governance of not only bodily but also cognitive and affective aspects of the life of the population. Digital society forms a new type of biopolitical body — a hybrid of physical, social, and virtual corporeality, fully integrated into circuits of surveillance and control. It has been established that large technological and media corporations become autonomous biopolitical actors, entering into a functional alliance with state and international governing structures. This alliance contributes to the formation of a new digital order in which legal guarantees are replaced by norms of security, digital ethics, and managed risk, thereby intensifying the asymmetry of biopower between governing structures and the population.

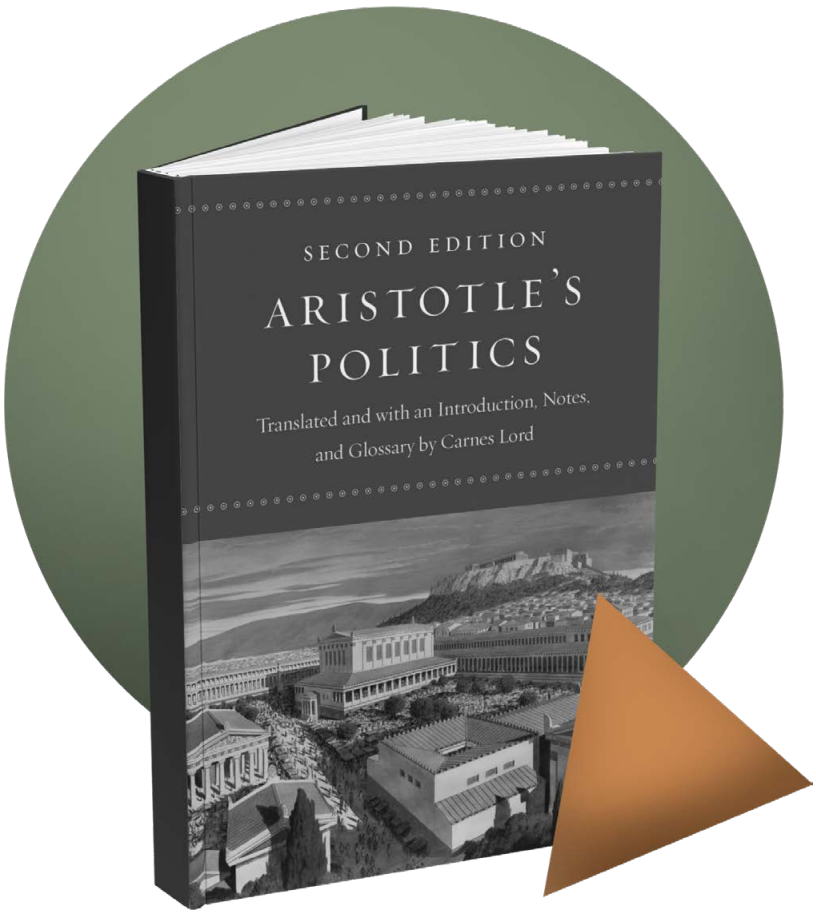
It has been identified that contemporary spaces of exclusion and control — camps, security zones, regimes of isolation — are supplemented by virtual and algorithmic spaces created on the basis of the development of artificial intelligence and big data. These spaces lack clear territorial localization, which makes it possible to extend the logic of the biopolitical camp to a global level, transforming the world into a large digital concentration camp. Taken together, the obtained results make it possible to assert that contemporary biopolitics is entering a phase of digital transformation, within which the state of emergency,

control over life, and the governance of death become interconnected and systemic elements of the global political order.

DISCUSSION

The well-known position of Aristotle regarding the understanding of the human being as a «political animal» (*zoon politikon*), which he defended in his treatises, most notably in the «Politics», deserves particular attention. The emphasis made by the ancient Greek thinker is placed precisely on the political dimension of the human being — on the human need to live together with others within a society (the *polis*) and to experience oneself as free. Will, or freedom, as a civic status was not merely an abstract principle; it also presupposed the possession of *aretē* by a free citizen. *Aretē* constituted freedom for the ancient Greek, insofar as it defined his social status. To be free in a democratic state meant *to be prepared to die for the polis* and to be capable of making decisions in the interests of the city rather than one's own. Freedom presupposed the existence of *isonomia*, that is, equality of all citizens before the law; *isegoria*, that is, the equal right of all citizens to participate in discussion and in the governance of public affairs; *isangelia*, that is, the possession of the right to defend democracy; and, finally, *parrēsia* as free, frank, and sincere truth-telling, even when such speech entailed a risk to one's own life from those in power.

It is evident that in antiquity there could be no discussion of processes of subjectivation, that is, of the formation of the individual as a subject. This meaning is modern-European in its origin and is directly connected with biopolitics. Politics becomes biopolitics when state political power appropriates care for the lives of citizens: it no longer demands, as it once did, an unconditional readiness to sacrifice life for the *polis*, but instead obliges the citizen to live according to the rules it establishes. In this sense, it acquires the character of power over life — biopower — that regulates the life of the biosocial body of the nation. As Michel Foucault observed, the concept of the subject contains two semantic meanings, both related to «becoming a subject». *Sujet* («subject») also means «subject» in the sense of one who is subjected. *Assujettissement*, or subjectivation, therefore signifies both becoming a subject (a modern European «personality») and, simultaneously, falling into an increasingly total dependence on the mechanisms of biopower. Indeed, it is in the eighteenth century that the biopolitical dispositif



emerges as a mechanism for governing groups of individuals. This form of control transforms society through medicine, economic institutions, and new forms of «governmentality» (Fr. *gouvernementalité*).

At the same time, there exists another, no less influential and widespread version of biopolitics, associated with Giorgio Agamben, a student of Martin Heidegger. According to the position of the now widely discussed Italian philosopher, biopolitical problematics have existed since the most ancient periods, particularly since antiquity; however, in the present they have undergone a substantial transformation. Nevertheless, the conceptual framework has remained unchanged — the problem of the individual's subjectivity as shaped by external forces, that is, by relations of power, has remained virtually the same. Indeed, as another prominent researcher of biopolitics, Roberto Esposito, has noted, the meanings embedded directly in the prefix «bio-» transform the conventional understanding of the political, constituting the «original core of biopolitical semantics» (Esposito, 2006, p. 15).

Within the framework of the stated topic, we are concerned with the complex of techniques for controlling both individual bodies and the social body of the population, as well as with the mechanisms through which regimes of power exercise control over individuals — most notably regimes of the state of emergency and their contemporary digital variants.

Biopolitics as a strategy of governance in Europe emerged largely as a result of the continuous improvement of technologies for controlling individuals. According to the studies of the French philosopher Michel Foucault, there was a certain evolution of these technologies as a response to persistent epidemic diseases affecting the population. Thus, as a result of the leprosy epidemic, a technology of control such as the exclusion of particular groups of the population emerged, the essence of which consisted in the direct isolation of an entire group of individuals. As Foucault writes, this disease «gave rise to sufficiently rigid forms of exclusion … which to a certain extent predetermined the scheme and the general principles of the Great Confinement» (Foucault, 1975, p. 289).

Undoubtedly, this technology of power had been applied earlier as well, in particular during the times of the Roman Empire; however, its specific feature in Europe lies in the fact that it formed an effective technology of exclusion oriented toward the discrimination of an entire group of «undesirable» individuals.

Subsequently, plague epidemics initiated the search for and the testing by power of a disciplinary technology of governing and controlling individuals, which came to be known as the «all-seeing eye» or the principle of panopticism formulated by Jeremy Bentham (Bentham, 1977). It was precisely the application of disciplinary techniques of panopticism during the period of the «Great Confinement» that made it possible to isolate not only «dangerous» individuals in spaces of strict isolation, but also to bring into being diverse forms of disciplinary techniques in other closed spaces (schools, hospitals, barracks, manufactories, workhouses, etc.). These techniques provided unlimited possibilities for power at any level, as an anonymous, invisible, and omniscient observer, not only to monitor but also to instill obedience and dependence in the individuals subjected to observation. It should be noted that this technology of control opens up broad prospects for power in the twenty-first century due to the development of modern digital technologies. At the same time, in one of his interviews from 1978 with the characteristic title «The Crisis of the Disciplinary Society», Foucault states that at a certain moment in the history of modern society «there appear more and more different categories of people who do not submit to discipline, and therefore we are forced to think about the development of a society without discipline» (Foucault, The société disciplinaire en crise / / Asahi Jaanaru. 20 anné, n° 19, 12 mai 1978 (Lecture at the Franco-Japanese Institute of Kansai in Kyoto on 18 April 1978).

It is precisely at this time, in the lecture course delivered at the College de France entitled *Security, Territory, Population,* that he develops this idea and arrives at the conclusion that in the eighteenth century classical discipline ceases to be the dominant technique of power relations and a new technology of power emerges, one that is oriented toward the security of the population. Security, as a national strategy, begins to employ a new statistical technique for describing various parameters of the vital activity of the population with the aim of its preservation. Indeed, the fight against smallpox required a fundamentally different descriptive technique: physicians accumulated and generalized data on the age of patients, sex, place of residence, occupation, climate, and so on. This technique made it possible to calculate comparatively the risk of contracting smallpox and to understand how living conditions needed to be changed in order to reduce this risk.

And if disciplinary techniques normalize, order, and spatially distribute individuals on the basis of pragmatic tasks aimed at their individual production as individuals through techniques of drill, training, examination, and so forth, then all these disciplinary techniques at the end of the eighteenth and the beginning of the nineteenth century are supplemented by entirely new technologies, the totality of which constitutes the essence of biopolitics. Unlike individualizing disciplinary power, oriented toward human corporeality, the «massifying» biopolitics is directed toward the human species, toward the multiplicity of people constituting a «global mass subjected to general processes of life, such as birth, death, reproduction, illness, and so on» (Foucault, 1997, p.156)

As a new technology of power, security achieves significant effectiveness through the anticipation of the course of social processes, where the modal categories of the possible, the necessary, the accidental, and their derivatives –the impossible and the undesirable — are established as the most important ontological operators for political technologies of governing individuals as a population. It is precisely this technology that formed the basis for the creation of the strategy of biopolitics and its components — biopower and biomasses — which are also connected with anti-epidemic measures, this time aimed at countering smallpox as the «reigning disease» of the eighteenth century (Foucault, 1997, p. 91). Thus, epidemics become a kind of catalyst for social and political transformations. The basic principle of the technology of governance through security is the classical liberal *laissez aller* (French: «to let go»); unlike disciplinary techniques of control, it does not attempt to regulate even the most insignificant aspects of individual and social life, but instead proposes, wherever possible, to follow the «natural course of things», primarily in the economy, which formed the foundation for the development of the strategic concept of biopolitics.

However, despite all the positive aspects of security technology for the development of liberal society, there exists an antinomy that is virtually impossible to circumvent. It was precisely this antinomy that later drew the atten-

tion of the French philosopher. Thus, security technologies rely on *raison d'État (State Mind)*, which presupposes state interest as «something that exists for itself» (Foucault, 1988) In turn, state interest is grounded in political rationality. From Foucault's perspective, «this type of rationality represents one of the most essential features of modern politics, which developed beginning in the seventeenth and eighteenth centuries» (Foucault, 1988). One of the imperatives of the state's political rationality with regard to the population is expressed in the phrase: we promise you a long and prosperous life, yet the safeguarding of your life goes hand in hand with the command to die in the name of state interest. Thus, the coexistence within the depths of political structures of enormous machines of destruction and institutions designed to protect individual life is implicitly presupposed. Foucault considers this to be «one of the principal antinomies of our political reason» (Foucault, 1988)

Equally important is another observation by M. Foucault, who suggested that the state and its state interest in themselves constitute a certain order of things, and that political knowledge distinguishes this order from juridical reflection (Foucault, 1988)

In which legal guarantees for the individual are secondary to state interest. The population is powerless in the face of the intentions of biopower. Moreover, within such an approach, the individual is of interest to the state only insofar as he or she can do something for its survival or its power (Foucault, 1988). This is why the population always turns out to be merely that which the state cares for for the sake of its own good, and therefore, in case of necessity, the state can, of course, also annihilate it. Thus, the reverse side of biopolitics is thanatopolitics (Foucault, 1988).

At the same time, if we return to the contemporary understanding of the subject, we find that the process of subjectivation among ordinary citizens has almost entirely disappeared, while they are viewed by power predominantly as a biological mass. Undoubtedly, at the level of state law within civil society, authority is obliged to continuously safeguard the interests of its subjects, to bear responsibility before them for its actions, and to remain an object of observation and control on their part. However, executive power inverts this responsibility to its own advantage and demands from ordinary citizens the unconditional execution of governmental decisions, regardless of how irrational they may be — not only from the standpoint of legal norms but also from that of common sense. As the well-known contemporary Slovenian philosopher Slavoj Žižek writes in this context, a message addressed by power at all levels to ordinary citizens can be formulated as follows: «In fact, the laws do not constrain me; I can do anything I want with you, I can treat you as guilty if I decide to do so, I can destroy you at my own whim» (Žižek, 2005, p.126). This eloquent interpellation of power addressed to each ordinary citizen constitutes an integral component of contemporary unlimited, that is, sovereign power. In other words, it is a telling gesture of power that indicates that state laws can sustain the legitimacy of authority insofar as subjects clearly recognize in them the echo of its absolute self-assertion.

If we recall the traditional sociocultural definition of the human being as a «bio–socio–cultural being», in which the «bio-» component is generally situated within a complex system of interactions with sociocultural and psychic components, it becomes clear that beyond the abstract divisions already embedded in this definition, it is impossible to describe the unity and mutual influence of the body, the soul, and the various forms of human action and activity as such. However, it is well known that the most important source of this understanding is ancient philosophy, which did not operate with a single concept of life but instead distinguished between two notions that were simultaneously interconnected and separate: *zoē*, understood as «life as such», inherent in all living beings without exception, including gods; and *bíos*, that is, life organized in a particular, proper way, which pertains only to the human being as a political creature. This distinction found its logical grounding in the works of Aristotle, particularly in his «*Politics*», as noted above. Indeed, for a long time it was precisely *bíos* that remained the form of life upon which political — that is, state — interests were focused, tightly binding ordinary citizens, power, and the state. It should be noted that subsequently a decisive shift occurred, whereby the unity of human lived experience — in which the corporeal and the spiritual were always inseparable — was split into a purely biological essence, on the one hand, and social, cultural, and political existence, on the other. Undoubtedly, this imagined rupture is an abstraction; nevertheless, it proved to be of enormous significance

for subsequent developments. The analysis of the origins of this extremely abstract division is repeatedly undertaken in the works of the renowned Italian philosopher Giorgio Agamben, who links it to sovereign power, which does not disappear. Moreover, as the Italian philosopher emphasizes, such a conditional division becomes possible only by virtue of the existence of complex biopolitical mechanisms aimed at the production of the biopolitical body, which constitutes the true activity of sovereign power (Agamben, 1998).

Later, in one of his recent interviews, Agamben states that «the concept of citizenship, which from Athens through the modern era occupied the center of the political life of the city, has in recent decades gradually been deprived of its real political content. Under the influence of biopolitics, and subsequently with the establishment of the security paradigm, citizens have come to express an increasingly passive condition, becoming objects of expanding and all-pervasive control» (Agamben, 2021).

However, as Michel Foucault demonstrates in his research, in the modern era the situation changed in a radical manner, and it is zoē that becomes the object of incessant governmental control, being incorporated as a constituent element into *bíos* and ultimately fully merging with it — an operation that constitutes the strategy of contemporary biopolitics. According to the concept of biopolitics developed by the French philosopher in his works of the 1970s and in his annual lectures devoted to biopolitics at the Collège de France between 1975 and 1979, the state not only manifests care and protection but also seeks to supervise people as a population, as a biomass, thereby transforming politics into biopolitics.

In an article published posthumously, Michel Foucault analyzes the political technology of individuals and notes that «the population always appears merely as that which the state takes care of for its own benefit, and therefore, if necessary, it is evident that the state may also destroy it. Thus, the reverse side of biopolitics is *thanatopolitics*» (Foucault, 1988, pp. 145–162). Toward the end of this article, closely examining the relationship between legal guarantees for citizens and *the state interest* of biopolitics, Foucault arrives at the following important conclusion: «It is impossible to reconcile law and order, because when we attempt to do so, we do so exclusively in the form of the inclusion of law within the order of the state» (Foucault, 1988, pp. 145–162).

Thus, the very possibility of distinguishing the priority of politics over law is conditioned by the continuous, centuries-long involvement of ordinary individuals in biopolitical technologies and the operation of their mechanisms, which, according to Foucault, has led to the uninterrupted etatization of power relations. This process represents obedience, complete consent, and trust in power, which, in turn, determines its unlimited capacity for expansion.

For this reason, various forms of states of emergency appear entirely natural as a temporary suspension of the operation of existing laws in connection with certain circumstances, the purpose of which is to restore a disrupted order and, paradoxically, to preserve the operation of the law itself.

Yet the entire Jesuitical subtlety lies in the fact that the generalization of the state of emergency renders it not a juridical exception — a kind of *casus belli* — but a rule, universally applied to the ordering of contemporary society, which fully corresponds to the biopolitical strategy.

Accordingly, the sovereign establishment of a temporary legal order of society draws ordinary citizens into an empty legal space in which the norm consists of illegitimate rules and commands.

Hence, we may observe a refined contemporary form of dictatorship that, while formally relying on legal norms, in fact transgresses them, rendering anomie practically inseparable from *nomos*. Moreover, the decision to introduce a state of emergency is taken by the sovereign or by «governments». In this case, however, a paradoxical situation arises: the sovereign — the guarantor of the law — who decides to suspend the operation of the law in the name of preserving the law, by this very act places himself outside the law.

In considering the theme of the state of emergency as a paradigm of contemporary Western society, it should be noted that modern biopolitics is no longer oriented toward the open violence characteristic of the sovereign power of premodern societies. Nor is it oriented toward the relatively rigid disciplinary power of enclosed spaces (prisons, hospitals — including psychiatric hospitals — military barracks, factories, workshops, schools, and the like). In his research, the French philosopher Michel Foucault argued that the sovereign power of premodern society was replaced by the biopower of modern societies immediately following the conclusion

of the Peace of Westphalia in 1648. Undoubtedly, this moment became the point of departure for the formation of European nation-states, a process that unfolded rapidly from the second half of the seventeenth century to the second half of the nineteenth century.

According to Michel Foucault's analyses, biopower is present wherever there are social relations and social communication — that is, wherever not only disciplinary practices directed at individual bodies within enclosed spaces are operative, but also diverse forms of biopolitical practices addressing large segments of the population. These practices permeate everyday life and continuously shape the corporeality and psyche of individuals in specific ways. In other words, such diverse practices of power are present not only in instances of crude, direct violence exercised by disciplinary power (which has by no means disappeared today), but also in the concealed coerciveness of a multiplicity of biopolitical practices. A defining feature of biopower, according to Foucault, is that «this power is everywhere, not because it embraces everything, but because it comes from everywhere» (Foucault, 1976). Thus, biopower permeates all strata of society and affects every individual to one degree or another.

At the same time, sovereign power has by no means disappeared within the contemporary biopolitical strategy of power, as Foucault once assumed. Rather, it has undergone a substantial transformation, one of whose defining features is the permanent existence of various forms of the state of emergency, instituted for the preservation of social order within the state and beyond it. Nevertheless, a number of highly problematic questions arise, to which certain scholars have drawn attention, in particular the well-known French philosopher Alain de Benoist. De Benoist identifies specific features of the contemporary state of emergency through an analysis of this phenomenon based on the views of the renowned German theorist Carl Schmitt (de Benoist, 2022).

Thus, reflecting on the state of emergency or the exceptional situation in the (neo)liberal state, the German scholar paid particular attention to the fact that «the exception reveals most clearly the essence of state authority.

Here the decision separates itself from the legal norm, and authority proves that in order to create law it does not need to have law» (Schmitt, 2021).

In this sense, for example, within the state-legal doctrine of John Locke the state of emergency was something incommensurable with the normal condition, just as for Immanuel Kant the right of necessity in a state of emergency was, strictly speaking, no right at all. Moreover, reflecting on liberal politics, Carl Schmitt wrote: «The tendency of the constitutional state to regulate the state of emergency in the most detailed manner possible signifies only an attempt to describe precisely the case in which law suspends the operation of itself» (Schmitt, 2021, p. 18).

A logical consequence of this line of reasoning is Schmitt's claim that when the operation of a legal norm is suspended, the exception allows one to better grasp the nature of politics itself by revealing where sovereignty is located — namely, in the concrete capacity to decide upon a particular situation. An additional and significant clarification offered by Schmitt is that the political sovereign instance does not necessarily coincide with the state: «*Souverän ist, wer über den Ausnahmezustand entscheidet*» — «Sovereign is he who decides on the state of exception» (Schmitt, 2021, p. 20).

Proceeding from these key theses concerning the state of emergency, Alain de Benoist concludes that neoliberalism is incapable of understanding the nature of the exception, just

as it is incapable of responding to it without betraying its own nature. This is because neoliberalism adheres to a purely procedural or formal-legal neo-Kantian conception of social order, which presupposes that a pre-established rule or norm must be applied to «any situation whatsoever» (de Benoist, 2022).

Furthermore, whereas in the «classical» exceptional case, as defined by Carl Schmitt, the measures adopted in an emergency situation were typically short-term and allowed for a gradual return to normality, in the case of the measures adopted after the terrorist attacks of September 11, 2001, one observes, on the contrary, the permanent establishment of a regime of exception that is continuously extended (de Benoist, 2022).

Although anti-terrorist legislation is directed primarily at suspects and «persons of concern», it has increasingly come to be applied to the entire population, thereby producing a genuine upheaval in criminal law.

In this sense, Giorgio Agamben is entirely justified when he observes that the true state of exception has now become the situation «in which we live», and which is in no way distinguishable from the rule. Here there is no longer any essential difference between «the citizen in a state of emergency, the Jew in the concentration camp, the comatose patient in intensive care, and the body preserved for organ extraction» (Agamben, 2021, p. 64).

Earlier, the Italian philosopher had already addressed this problem by outlining the principles of the state of exception. Thus, within Agamben's development of the concept of «bare life», according to which, for those who hold power, so-called *homines sacri* — that is, individuals with respect to whom, within the contemporary constitutional state, the detailed regulation of an imposed state of emergency is entirely permissible — emerge as the key object of political governance. This, however, signifies an attempt to describe precisely those cases in which law suspends the operation of itself (Agamben, 2005).

Elaborating this position, Agamben arrives at several fundamental conclusions: the existing totality of the state of exception — whether permanent or explicit — renders it not a juridical exception but a rule applied in the ordering of contemporary society. This opens the possibility for a topological description of the space of the state of exception, within which the emptiness of the content of the juridical norm is affirmed (Agamben, 2005).

Accordingly, it may be argued that in Agamben's work one finds not only an account of the establishment by sovereign power of a temporary order for various legal institutions within society, but also the coercive inclusion of human lives into an empty legal space. Equally important is the fact that the operation of this empty space is no longer determined by someone's good or evil will within a specific spatio-temporal interval, but is endlessly reproduced, continuously expanding its boundaries and its coercive impact on individuals.

In this context, Slavoj Žižek has ironically remarked that human rights are acceptable only insofar as they are «reinterpreted» to such an extent that they are capable of encompassing torture and a permanent state of emergency (Žižek, 2005, p. 122).

Finally, it should be noted that the permanent state of exception consists in the appropriation of the logic of war, which under normal circumstances operates only externally, but upon its official introduction penetrates into society itself, leading to the suspension of legal norms. The state henceforth legitimizes, in order to consolidate its own power, the maximal restriction of the freedoms of the population, which is regarded exclusively as a biomass.

It is therefore entirely unsurprising that the thesis of the legitimation of the state of exception has gained currency, according to which, in the struggle against terrorism as a global threat at the international level, it is necessary to consolidate the authority of the dominant American state, which is purportedly best able to ensure «global security» (de Benoist, 2022).

As a contemporary continuation of biopolitics and its extreme expression, necropolitics has now emerged, a phenomenon examined in detail by the Cameroonian scholar Achille Mbembe (Mbembe, 2019).

In his analysis, Mbembe considers contemporary biopower through the prism of two additional concepts: the state of exception as a condition of hostility toward a particular group of individuals, and the state of emergency. Biopower actively works to produce such exceptions, emergency situations, and to a significant extent fabricated representations of «enemies». According to the Cameroonian thinker, the conjunction of biopower with these coercive trajectories creates the normative foundation for the right to kill.

If contemporary biopolitics is understood as necropolitics, it becomes entirely evident —

and this is convincingly demonstrated by Mbembe's research — that «the ultimate expression of sovereignty resides, above all, in the power and the capacity to dictate who may live and who must die. To kill or to allow to live constitutes the limits of sovereignty, its fundamental attributes. To be sovereign is to exercise control over mortality and to define life as the deployment and manifestation of power» (Mbembe, 2019, pp. 129–130).

In concluding these theses concerning the study of the problems of contemporary biopolitics, it may be stated that sovereign power, as its most important component, exists at the very limits of its capacities and at times transgresses those limits. It coexists alongside disciplinary and control power, while the latter continually enhance their capacities through processes of digitalization and medialization.

The digital society, as a modernization of the information society, becomes an object of biopolitical governance. Advanced digital technologies make it possible to implement all forms of governance, ranging from various modes of surveillance to diverse forms of control. Their functioning is ensured by the fact that the corporeality of individuals is extended from the physical body to numerous social forms. The individual becomes a set of data — from fingerprints, the digitization of facial contours, iris scanning, and electronic signatures in biometric passports to social media logins. Thus, both the physical and social corporeality of the individual acquire their virtual copy, which fully characterizes the individual as a biopolitical body that is entirely subject to biopower. This enables biopower to exercise any form of control over individuals, up to and including criminal punishment for a comment on a social network, practices that have already become fairly routine. Moreover, the constant surveillance of the physical bodies of individuals who act as representatives of a confrontational political opposition to the authorities, the placing of these bodies under unremitting control up to and including subsequent political or physical elimination, is becoming the norm for contemporary biopower.

If the concentration camp, as a biopolitical paradigm, is a European creation — as discussed by G. Agamben (see Agamben, 2000; idem, 2002) and by R. Braidotti, who argued that «the proliferation of detention camps, security camps, and prisons within the formerly civic infrastructure of European cities is an example of the inhuman expression of the face of the fortress called Europe» (Braidotti, 2013, p.87) — then the digital biopolitical camp has spread across the entire world, including China. As the American journalist Geoffrey Cain writes: «In China's Xinjiang province, where new technologies for surveillance and control of the population are being introduced, a program of 'predictive policing' was created using large data sets, within which a suspect could be detained if artificial intelligence predicted that he would commit a crime in the future» (Cain, 2021, p.15). Notably, individuals are forcibly placed there even without being accused of committing any crimes; the main determining factor is their religious affiliation with Islam.

By 2017, the number of detainees in digital concentration camps had grown to 1.5 million people out of an Uyghur population of 11 million. China's goal is to erase the identity, culture, and history of a people and to achieve the complete assimilation of millions of individuals (Cain, 2021, p.16).

This example fully illustrates a profound understanding of biopolitics and its further extrapolation as predicted by Giorgio Agamben (see Agamben, 2021) and Slavoj Žižek (see Žižek, 2020a; idem, Žižek, 2020b). Contemporary systems of video surveillance, social monitoring, and other forms of control make it possible to effectively apply this deliberate tactic of biopower through all modern digital innovations in order to address a wide range of tasks — from political and social governance and control to the harsh suppression of dissent.

Contemporary digitalization and the rapid development of artificial intelligence create new opportunities for the influence of giant technological corporations on biopolitics, such as Google and Facebook, which control the most popular social networks — Amazon, Instagram, YouTube, and others. They acquire an ever-greater degree of power, which cannot but cause concern on the part of state authorities themselves.

Moreover, these corporations gain broad opportunities to govern individuals at the level of their unconscious perception, shaping their needs and desires, and imposing a particular worldview or ideological concept of a given state in the pursuit of its goals and objectives in international politics, while receiving unprecedented preferences from dominant states. Contemporary digitalization creates a peculiar form of digital and media imperialism of giant infor-

mation corporations, characterized not only by an all-pervasive capacity to rapidly transmit the biopolitical position, that is, not merely to disseminate information but also to subordinate it, to create specific images that constitute reality for ordinary individuals (see Han, 2022).

The alliance of state authorities in the leading countries of the world with the power of media corporations has led to the formation of a new digital order, defined not so much by legal rights guaranteed to the individual by the state as by the emergence of a specific digital ethics of a «safe digital world». This digital order becomes yet another fairly effective means of manipulating individuals on the part of biopolitical power. It is precisely the use of new media technologies and social networks that leaves an indelible mark on the struggle not only for control over the individual bodies of the population but also for control over their consciousness and unconscious, a danger against which the American scholar Shoshana Zuboff warns us (see Zuboff, 2019).

Thus, digital biopolitics accumulates within itself a profound thanatopolitical core, in which the state of emergency is simultaneously immanent — that is, internally and essentially inherent to it — and implicit, that is, concealed and not immediately perceptible.

CONCLUSIONS

Contemporary biopolitics demonstrates the secondary status of legal guarantees for individuals under the dominance of absolute or sovereign power in modern society — that is, the complete subordination of law and all its institutions to the voluntarism of political leaders, which ultimately leads to necropolitics. This, to a significant extent, explains the passivity and distrust of the population toward the existing authorities and their bureaucratic apparatus, which in certain cases may give rise to subversive actions and practices; however, this constitutes a subject for separate analysis.

The article examined the specificity of the state of emergency as a permanent condition of contemporary biopolitics.

Various technologies of governing individuals by power were analyzed, ranging from technologies of total exclusion and the disciplinary panopticon to the technology of security. The latter is applied no longer to individual persons but to populations of individuals.

It is shown that the reverse side of biopolitics is always thanatopolitics. This was demonstrated with particular clarity by the coronavirus pandemic, which was deliberately used by global political elites to legitimize new biopolitical techniques of population control. The application of these techniques is already incompatible with the political rights and freedoms of individuals. The contemporary world has witnessed the real state of affairs firsthand: any state of emergency — whether epidemiological, military, or anti-terrorist — effectively deprives ordinary individuals of the state's legal protection.

It is shown that the contemporary individual is practically losing subjectivity and losing the possibility of parrhesia, that is, the right to autonomous, responsible, and truthful speech and judgment in criticizing power and resisting it within the framework of laws established by the constitution. It is demonstrated that theoretical principles, as the basis of citizens' legal guarantees, are only partially ensured or are practically unenforceable, not so much because of the voluntaristic actions of political actors vested with power, but because of the archaeology (*archē*) of the relationship between politics and law, in which the latter is always secondary.

The article emphasizes that the state of emergency has a permanent and systemic character. It is established that, in contemporary conditions, biopolitics acquires new forms. Thus, a number of contemporary researchers, in particular A. Mbembe, show that the state of emergency becomes the norm for vast categories of the population in so-called death-worlds. These so-called spaces of death signify not only the physical death of individuals but also social and political death, which effectively transfers biopolitics into the plane of thanatopolitics. It affects entire populations, granting them the status of the living dead.

It is shown how contemporary digitalization and medialization open unprecedented possibilities for biopower to observe, control, and govern modern populations. The role of giant media corporations is analyzed as an effective factor in the exercise of biopower and universal politicization, which in effect deprives contemporary individuals of real possibilities for private existence. In this regard, it is noteworthy that current social spaces of exclusion, isolation, and extensive spaces of «security» with their technologies of governance are being supplemented by virtual spaces created on the basis of the rapid development of artificial intelligence.

This will create new opportunities in the near future for the intensification of biopolitical practices, which is fraught with the creation of a digital concentration camp on a global scale.

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REFERENCES

Agamben, G. (2021). Where Are We Now? The Epidemic as Politics. Rowman & Littlefield Publishers. 104 p.
Agamben, G. (2019). What is a command? In Creation and Anarchy: The Work of Art and the Religion of Capitalism (pp. 51–65). Stanford University Press. https://doi.org/10.1515/9781503609273–005
Agamben, G. (2017). What Is a People? (L. Chiesa & M. Mandarini, Trans.). Stanford University Press. 64 p.
Agamben, G. (2005). State of Exception (K. Attell, Trans.). Chicago, IL: University of Chicago Press. 104 p.
Agamben, G. (2002). Remnants of Auschwitz: The Witness and the Archive. Zone Books. 176 p.
Agamben, G. (2000). What is a Camp? In Means Without End: Notes on Politics (V. Binetti & C. Casarino, Trans., pp. 37–45). Minneapolis, MN: University of Minnesota Press. 153 pp.
Agamben, G. (1998). Homo Sacer: Sovereign Power and Bare Life. Stanford, CA: Stanford University Press. 216 p.
Alemán, J. (2023). Lacan and Capitalist Discourse: Neoliberalism and Ideology. Routledge. 128 p.
Benjamin, W. (1999) Zur Kritik der Gewalt // Gesammelte Schriften, Hg. von Rolf Tiedemann und Hermann Schweppen-häuser. Bd. II (1), Suhrkamp. Frankfurt a. M., S.179–204.
Bentham, J. (1977). Le panoptique. In *Le Panoptique* (pp. 9–31). Paris, France: Belfond.
Braidotti, R. (2013). The Posthuman. Cambridge: Polity Press. 180 p.
Butler, J. (2012). Parting Ways: Jewishness and the Critique of Zionism. New York: Columbia University Press. pp. 68–98.
Butler, J. (2015). Notes Toward a Performative Theory of Assembly. Harvard University Press. 248 p.
Butler, J. (2020). The Force of Nonviolence: An Ethico-Political Bind. Verso Books. 224 p.
Cain, G. (2021). The perfect police state: An undercover odyssey into China's terrifying surveillance dystopia. New York, NY: PublicAffairs. 304 p.
Dean, M. (2010). Governmentality: Power and Rule in Modern Society (2nd ed.). London, UK: SAGE Publications. 294 p.
de Benoist, A. (2024). Against Liberalism: Society Is Not a Market. Middle Europe Books, 320 p.
de Benoist, A. (2022). Carl Schmitt actuel: guerre juste, terrorisme, État d'urgence, «Nomos de la Terre». Paris, France: Dualpha. 170 p.
Esposito, R. (2008). Bíos: Biopolitics and Philosophy. Minneapolis: University of Minnesota Press. 304 p.
Foucault, M. (1975). Surveiller et punir: Naissance de la prison. Paris: Gallimard. 352 p.
Foucault, M. (1976). La Volonté de savoir. Histoire de la sexualité, Tome 1. Paris, France: Éditions Gallimard. 211 p.
Foucault, M. (1994), 'La Philosophie analytique du pouvoir', in M. Foucault, Dits et Écrits, tome III: 1976–1979, Paris: Gallimard. 588 p.
Foucault, M. (1997). *Il faut défendre la société: Cours au Collège de France* (1975–1976). Eds. Bertani, M. & Fontana, A. Gallimard; Paris: Seuil. 304 p.
Foucault, M. (2004a). *Sécurité, Territoire, Population. Cours au College de France* (1977–1978). Eds. Bertani, M. & Fontana, A. Gallimard; Paris: Seuil. 456 p.
Foucault, M. (2004b). *La Naissance de la biopolitique. Cours au Collège de France (1978–1979).* Eds. Bertani, M. & Fontana, A. Gallimard; Paris: Seuil. 368 p.
Foucault, M. (1988). Technologies of The Self. A Seminar with Michel Foucault. The Political Technology of Individuais. Amherst: The University of Massachusetts. P. 145–162.
Foucault, M. (1982). The Subject and Power («Le sujet et le pouvoir», trad. E Durand-Bogaert), in Dreyfus H. and Rabinow P, Michel Foucault: Beyond Structuralism and Hermeneutics, Chicago, The University of Chicago Press, pp. 208–226.
Han, B-Ch. (2022). Infocracy: Digitization and the Crisis of Democracy (D. Steuer, Trans.). Cambridge, UK: Polity Press. 80 p.
Han, B.- Ch. (2018). Topology of Violence. Cambridge, MA: MIT Press. 168 p.
Han, B-Ch. (2015). The Burnout Society. Stanford Briefs, 2015. 72 p.
Hardt, M., & Negri, A. (2025). Empire (Rev. ed.). Cambridge, MA: Harvard University Press. 478 p.
Hardt, M., & Negri, A. (2005). Multitude: War and democracy in the age of empire. New York, NY: Penguin Books. 448 p.

Killbom, B. (2004). Superego Dilemmas. Psychoanalytic Inquiry. № 2, vol. 24, p. 175–182.
Laurette T., Walsh M. (2011) Elmhurst College, Elmhurst, IL The Competing Meanings of "Biopolitics" in Political Science: Biological and Post-modern Approaches to Politics. To be presented at the American Political Science Association's Annual Meeting, Seattle, WA, September 1, 2011. P.2, p. 1–30
Mbembe, A. (2019). Necropolitics (S. Corcoran, Trans.). Durham, NC: Duke University Press. 224 p.
Mills, C. (2017). Biopolitics. NY: Routledge. 186 p.
Negri, A. (2008). The labour of the multitude and the fabric of biopolitics. Globalization Working Papers, 08/3. https://prod-ms-be.lib.mcmaster.ca/server/api/core/bitstreams/c19389d6–4ee0–4c10-b23f-96a8b48b3cb6/content
Palahuta, V.I. (2025). Neoliberalism as Ideological Infrastructure of Modern Society: A Critical Perspective *Newsletter on the Results of Scholarly Work in Sociology, Criminology, Philosophy and Political Science.* Vol. 6. No.1. P. 16–29 DOI: https://sci-result.de/journal/issue/view/15
Rancière, J. (2004). «Who is the Subject of the Rights of Man?», South» «Atlantic Quarterly, vol. 103, no. 2–3, pp. 307–309.
Rancière, J. (1995). La mésentente: Politique et philosophie. Paris, France: Galilée. 200 p.
Schmitt, C. (2021). Politische Theologie: Vier Kapitel zur Lehre von der Souveränität. Berlin: Duncker & Humblot. 72 p.
Watkin, W. (2014). Agamben and indifference. London, UK: Rowman & Littlefield International. 316 p.
Watkin W. (2015) Agamben, Benjamin and the Indifference of Violence // Towards the Critique of Violence: Walter Benjamin and Giorgio Agamben. — Bloomsbury, 2015. P. 139–152.
Zuboff, Sh. (2019). The Age of Surveillance Capitalism: The Fight for a Human Future at the New Frontier of Power. Public Affairs, 704 p.
Žižek, S. (2005). Against Human Rights. New Left Review, 34, July-August 2005, pp. 115–131.
Žižek, S. (2020). Hegel in A Wired Brain. Bloomsbury Academic. 208 p.
Žižek, S. (2020). PAN(dem)IC!: COVID-19 shakes the world. New York, NY: OR Books. 140 p.
Žižek, S. (2008). Violence: Six sideways reflections. New York, NY: Picador. 272 p.

CULTURAL FREEDOM
CANNOT BE REDUCED TO FOLKLORE...

DR. LUCIEN OULAHBIB

UNIVERSITE JEAN MOULIN LYON 3

- *ORCID: https://orcid.org/0000-0002-3363-4005*
- *Email: lucien.oulahbib@free.fr*

Lucien Oulahbib is a french thinker, author, sociologist, and political philosopher who teaches in Lyon, France. In past he was a host at radio Paris 80 and was a reporter, also Lucien Oulahbib was an editor of *Magazine Sans Nom, Citizen K.* and *Technikart*, and worked as a freelance journalist for *Esprit Critique, Dogma, Marianne* and *Tumulte.*

ABSTRACT

When "culture," meaning all those ways of being communicated through internal (thoughts) and external actions (languages and various "codes" personified in attitudes) within given "groups" (ethnic groups, nations "grouping" them together in a more or less conflictual manner) is not reduced to folklore (such as decorative art) or social engineering (management of the "flow" of signs within it) this implies that each of these actions (internal and external) *is* necessarily political in the broad sense: not only personified by an explicit sovereign power (*Polis* or State), but also implicitly bound together by a shared internal and external *reality* (*Politeia* or "nation").

However, while this distinction (which is not a separation) between Polis (sovereignty of choices within a nation-state) and Politeia (culture of sense of belonging in the strong sense of civilization) and their confrontation (there are "nations" without "state" without "Polis") seems universal, it is also partly invisible. It is, in a way, "the code of codes," translated, for example, albeit partially, in international relations through diplomacy or the "trade" of intelligent and "soft" power acting through civilizational influence rather than through the mere demonstration of force.

And this code of codes operates in part in the interstices, in the unsaid, the implicit, in order to live and act "on the edge," that is, sometimes in a disruptive transgression within the social stratification, revealing certain flaws; which means that while knowledge of this code of codes does indeed make it possible to preserve and even extend acquired positions, its *recognition* can also put us in danger.

For it can shed light on its gray areas; this is, for example, what the war in Ukraine reveals today as the clash between Polis and Politeia, personified by certain ways of preserving oneself that are quite close to the negative refinement embodied by the selfishness and sectarianism of certain individuals, personified in particular by the arrest and detention for more than a year and a half of an eminent researcher in the field of depth psychology, more precisely the study of the interstices between explicit and implicit codes: Oleg Maltsev. How does this arrest serve as a mirror revealing the invisible side of these codes that animate the tacit and implicit life of this link between *Polis* and *Politeia*?

Keywords

culture, code, polis, politeia, invisible, universal, Ukraine, Maltsev

INTRODUCTION

It is therefore important to note that this ambivalent and conflicting definition of culture (**Polis** or sovereignty of a nation-state *and* **Politeia** or common internal and external reality) can also bring together, in a permanent *praxis* (and therefore not only in the historical past), individuals

of more or less diverse ethnic origins whose sometimes persistent conflicts express precisely that culture is not just folklore (Arendt, 1958; Geertz, 1973); even if they continue to share a common language as *well* as customs, tales, legends, and skills that bring them together internally and externally (Bourdieu, 1991; Anderson, 1983). This implies a fundamental opposition between plural/multi/cultural societies: "plural" indicating a prioritization of common culture over singular cultures, while "multi" remains synonymous with friction, with the "polis" seeking to dominate the "Politeia" (Mouffe, 2005; Barry, 2001)…

Just as every "group" " (individual, ethnic group, nation, empire, group, company, institution, etc.) technically (*Technè*) weaves a whole collective imagination (*Psyche*) of inner reality (Castoriadis, 1987), which is then politically united into an outer reality by ethical principles and norms that give it linguistic and legal values that conflict if Polis and Politeia are not linked (or Nation-State precisely); these are what could also be called civilizational entities that can always continue to clash as *Polis*, even if they interact as *Politeia*, whereas one might have thought that after two world wars, the idea that implicit universality could be institutionalized with all these development programs; but this remained a pipe dream because the most powerful did not accept that a global *Polis* could emerge as "global governance" when it was suspected, despite its good intentions, of surreptitiously paving the way for the standardization of all *Politeia* under a single "nomadic" business-minded and hygienist sphere (and controlled by three giants: Digital, Pharmaceutical, Military); which gradually dilutes all national characteristics and individual singularities into undifferentiated "mixtures," into multimodal "moles," biotech neurons "intelligently" placed under the "label" of "Care" awaiting arrangement with "autonomous" machines which, armed with the "precautionary principle," will know how to protect "us" through regressive rather than progressive osmosis as the shares of humanity and citizenship recede (Agamben, 2005; Esposito, 2011; Amoore, 2013)…

*

Nevertheless, what interests us most here is not to understand this (permanent) conflict between Polis and Politeia, nor to analyze what unites *and* distinguishes all these cultural codes that translate human passions and moods into expressions (symbols, representations, imaginaries, etc.). What interests us here is to determine whether it is also possible to discover *something else* within them that makes them universally "vibrate" like an implicit "unspoken" element that runs through all these codes, like a *code of codes*, and which, by energizing them, becomes a vehicle for change (Bourdieu, 1991; Taylor, 2004)…

So, what is encoded and decoded beyond the signs, symbols, skin colors, and eye shapes? What brings them together, but this time not in international institutions and their uniform official documents and speeches, but in the interstices of the invisible realm, that of the imagination enveloping each individual, ethnic group, people, nation, group, or company, adding, gathering, and synthesizing a whole invisible "life" that can nevertheless be perceived in the blink of an eye, a smile, a common attitude towards a particular phenomenon or shared experience, even if it is just a piece of music when a Japanese band plays a jazz classic or a jazz musician incorporates an Indian melody, or when a Chinese computer scientist codes in a Californian laboratory…

There is therefore, *between* cultural codes, in the very interstices of behavior (approaches, gestures, and breathing), in the exchange of glances, words, laughter, anger, and love, in the exchange of gifts and counter-gifts, a universal savoir-faire of the order of sympathy and antipathy, attraction and repulsion; and all of this, namely this set of bodily signs and their external symbols (languages, witty remarks related or unrelated to the spirit of the times, permanent or new allegories of flags and statues, the emergence and persistence of mottos and their iconography) all these signs and symbols thus allow each action or "reality" to emerge, first internally in the form of "thought," then externally in the form of "signs" that are expressed as what is requested or offered in each face-to-face or remote interaction experienced as "real" (or this mixture of constraints within internal and external imaginaries); and all this forms a kind of constant "swell" (inflated by rumor and opinion) within the human "sea," a whole *politeia* of *politeia* (a code of codes) that the *polis* (institutions) nevertheless attempt to regulate in private (companies) and public (nation-states) "ports."

The "swell" thus intertwines "currents" of thought, fanning their tensions, passions, and internal conations (or preferences) "specific" to each individual, as well as their external

interfaces that solicit them, linked to multi-ethnic nations or not, bound or not by power relations condensed into the "State." by catalyzing them, unifying them in objects whose forms will confront, measure, and exchange each other, including by clashing with opposites that attract each other. And all this swelling of internal and external signs and symbols in constant competition then expresses a kind of code of underlying codes, always assembling their bodily signs and symbols but expressing them precisely in an evasive manner through this code of codes, like this invisible sympathetic writing on a parchment which, in the light of a flame, reveals what is written there as a path; hence the importance of that major tool that is intuition (that "absolute knowledge" said Hegel, that "categorical intuition" in Husserl reading Descartes) in grasping them.

Finally, it should be noted that this code of codes *is* universal: it organizes the interstices of the life of signs and symbols that weave a culture at a given moment, also intensifying it thanks to this tool that intertwines dreams and hopes in each imaginary encounter that is the urban phenomenon (which is why the city is not only made up of hamlets); this "code of codes" is undoubtedly what is also called the spirit of the times (*Zeitgeist*), allowing both the persistence and the brilliance of human life in "posture" within each political singularity (Politeia) that a Polis will nevertheless want to domesticate…

METHOD

The objective of the research here will therefore be to first determine whether this "transcode" approach is not only plausible but also of interest for the global analysis of human worlds. Can they be deciphered in this way "beyond" their common space, which is "the Politics (politeia), and that "the" politics (Polis) claims to constrain their internal and external realities (or actions).

Next, we will observe whether it is possible to achieve this by seeking and accepting the truth of the facts, that is, by analyzing all areas, including in times of war, the universality of this code of codes, even if this is not subjectively pleasant because it may obstruct the idea of equidistant or isotopic binary opposition, in the sense, for example, that there would only be "good guys" on one side and "bad guys" on the other, even if this may be the case in certain circumstances; in any case, at least in our approach here, which is a "neutral" one, this requires the suspension (*epoch*) of not modifying this truth or concealing it to serve interests contrary to the will of humanity and of each citizen and individual, because no one, not even a liar, can live outside of it…

But how can this be achieved? By attempting to define tools that enable us to identify anthropological "invariants," i.e., to analyze permanent criteria that are also dynamic factors (or "functors") in the sense that they can also be used as points of reference for analyzing how internal and/or external reality functions.

This will finally allow us to apply them to a few examples, in particular to the situation in Ukraine and the analysis of certain arbitrary arrests such as that of Oleg Maltsev in Odessa.

RESULTS AND DISCUSSION

I. Two Transcendental Codes are Universally Identifiable

Thus, human "plastics," the "Self"[1], and their "cosmologies"–these ways of "feeling" being (in) the world – are two sides of the same coin (Oulahbib, 2019). "Body and soul" are distinct (which does not mean separate in an oppositional

1 "How can human action be assessed in terms of sustainable development of the Self? Contribution based on the work of Pierre Janet", *in https://hal.science/hal-03488377*

sense) in their interface with the world, and their interactions in tension – constantly traversed by power struggles arising from the Politeia and the Polis in conflict – form these "cultural" codes. These codes encompass all ways of being in and of the world, both explicit (first Code) and implicit (second Code). The latter is particularly studied here, for example in the idea of "understanding each other with half a word," sharing a "half smile" after a "sympathetic" glance in a crowded, bombarded alleyway, when a contract is first legitimized by a word or a handshake before being formalized.

There are therefore two types of codes that transcend positions and their physical manifestations in the sense that they structure them universally (ontologically) and surreptitiously in all the interstices of human and social life; both are found everywhere in the slightest gesture, glance, and breath.

- **The first code**, culturally explicit, attempts to bring together certain distinctive signs (languages, jargon, tics and gestures, traditions, tales and legends, arts and techniques…) that allow people to externalize their inner reality and its various actions in order to interact with each other and bring in modifying elements that also create new traditions.
- **The second code**, which is implicit, indicates to a certain extent that it is not enough to be educated in the first code, but that one must also identify its intelligence, that is, the spirit (or the code of codes, so to speak) that inspires the way one behaves within it. It is therefore a question of knowing how to be both an insider and an outsider, not only to reproduce the first code, but also to innovate within it, because one is most familiar with all the codes necessary to propose original solutions which, if successful, attract attention and seduce even the most experienced and original individuals; This increases their share of power, authority, and recognition of their own skills, three elements of Power according to Tradition (in Machiavelli and Weber), but which can precisely disturb those in power and therefore do everything they can to negatively preserve their prerogatives, imprison their opponents, or simply those whose original methods and results overshadow them.

This dialectic between the first and second codes (the first mechanical and conventional, the second dynamic and original) is present within each Self (individual, group) and therefore measures, on the one hand, the ability to preserve the established order but also, on the other hand, recognizes that the domination of the first code over the second can be counterproductive, particularly in certain circumstances because sometimes, and especially in times of crisis, these require a certain originality when the usual solutions struggle to resolve the problems at hand, even if one possesses all the signs of power; This means that if a person turns out to be somewhat disruptive but proudly displays original ideas (a bit like Dr. Oleg Maltsev, currently in prison in Ukraine[2], see also below), they can become a kind of pioneer, positively refining methods and solutions, even if that person, because they demonstrate that their solutions are better, is arrested against their will (Oleg Maltsev (psychologist), n.d.).

So, in a way, and contrary to those who think that this only happens in exceptional circumstances, it seems that we have always been in a situation shaped by these two types of "codes," one conventional, the other disruptive, sometimes triggering a "war" between those who want to believe only what powerful people say on one side and those on the other side who think that we cannot continuously apply solutions that do not work while hoping each time that there will be a positive result (here we recognize Einstein's definition of insanity (Quote Investigator, 2017)).

This is why, even at the global level, situations can arise in which the dialectic between the first and second orders seem to disturb certain powers that prefer the negative preservation of the conventional by opting for the negative dissolution of all originality. This can consist of seeking to negatively dominate the second order, that of implicit interactions, the breeding ground for innovation, by imposing on it, for example, the control

2 https://en.wikipedia.org/wiki/Oleg_Maltsev_ (psychologist)#Arrest_and_Detention

of the "third order," the order of Simulacra (analyzed by Jean Baudrillard)[3] that is, the substitution of internal and external reality by increasingly "intelligent" modeling…

But this influence, which is not new, while amplified by this "precession of simulacra" claiming to master the dialectic of signs and symbols between the first and second orders (between explicit conventions and implicit interactions), has not prevented the emergence of new "leaders," new precursors, prophets, scholars, and their popularizers, now called "influencers," who are increasingly spreading throughout the current global order of social networks that organize our perception, which is both singularly particular and universal.

These "disruptors" are not just merchants of signs, but bring unique points of view and solutions that can frighten certain states because they can challenge the dominance of certain groups whose preservation and refinement become negative in the sense of selfishly preserving interests while indulging in the most ostentatious sophistry, preferring instead to keep their populations bound by outdated codes of cultural apprehension that stifle thoughts, gestures, and attitudes, as we see in totalitarian regimes.

The temptation is then great to try to ban the second order by imposing the third order in order to preserve the first order, that of convention; which will encourage a desire to negatively regulate social networks, to hunt down and imprison anyone who comes up with original solutions and, worse still, to accuse this group (networks and disruptive elements) of manufacturing "fake news" within the first order. It is therefore time to propose four key tools for analyzing how we can measure the extent to which a given action strengthens or weakens this dialectic between the first and second cultural orders, which articulate conventionality and originality.

II. Four Angles or "Tools" Can Be Used to Understand These Two Codes

Each action, whether internal or external, seeks to be strong enough to preserve the coherence of its emergence; the notion of "preservation" is therefore important; it is the first tool or angle of the emergence of the Self to be and not just to exist; it can be positive if it strengthens the Self in question, but negative if it weakens it; for example, by containing it only in the first order, that of convention. However, in order to refine this preservation in a positive way, a second angle or tool is needed, that of refining the Self to be what it *wants* to be (and not just exist; let us repeat: the stone exists, it is not…); this requires action above all in the second cultural order, that of originality; how? By triggering the third tool, that of positive diversification acting within both orders in order to organize and build action on several levels in several materials within internal and external realities, whereas negative diversification will disperse its efforts, forgetting the overall idea of preserving and positively refining the Self (individual, group…).

This is why a fourth tool is necessary: it serves to prioritize and thus dissolve what is not necessary to preserve for positive refinement, like an old tradition replaced by a new one that does not necessarily eliminate but transcends (Hegelian Aufhebung (Hegel.net, n.d.)) towards the "better," that of refinement, thus rejecting negative dissolution, which uses the "Negative" as the sole tool of destruction (nihilism). The former acts with a view to preservation and refinement of being. Thus, even if the transformation of marble into a statue negatively alters its original nature — that of the first-order convention — its nature nevertheless persists within the second order through the originality of its emergence as a work of art. One can object that, from the point of view of the marble, its transformation, its transcendence, was imposed on it. But the same can be said of all domestication, even all socialization, when the natural human being wants to act as a "political animal." It must universally and objectively measure its mode of appearance and being within the first and second orders of Culture, which precisely seeks to give the most refined form possible to the passions of Self.

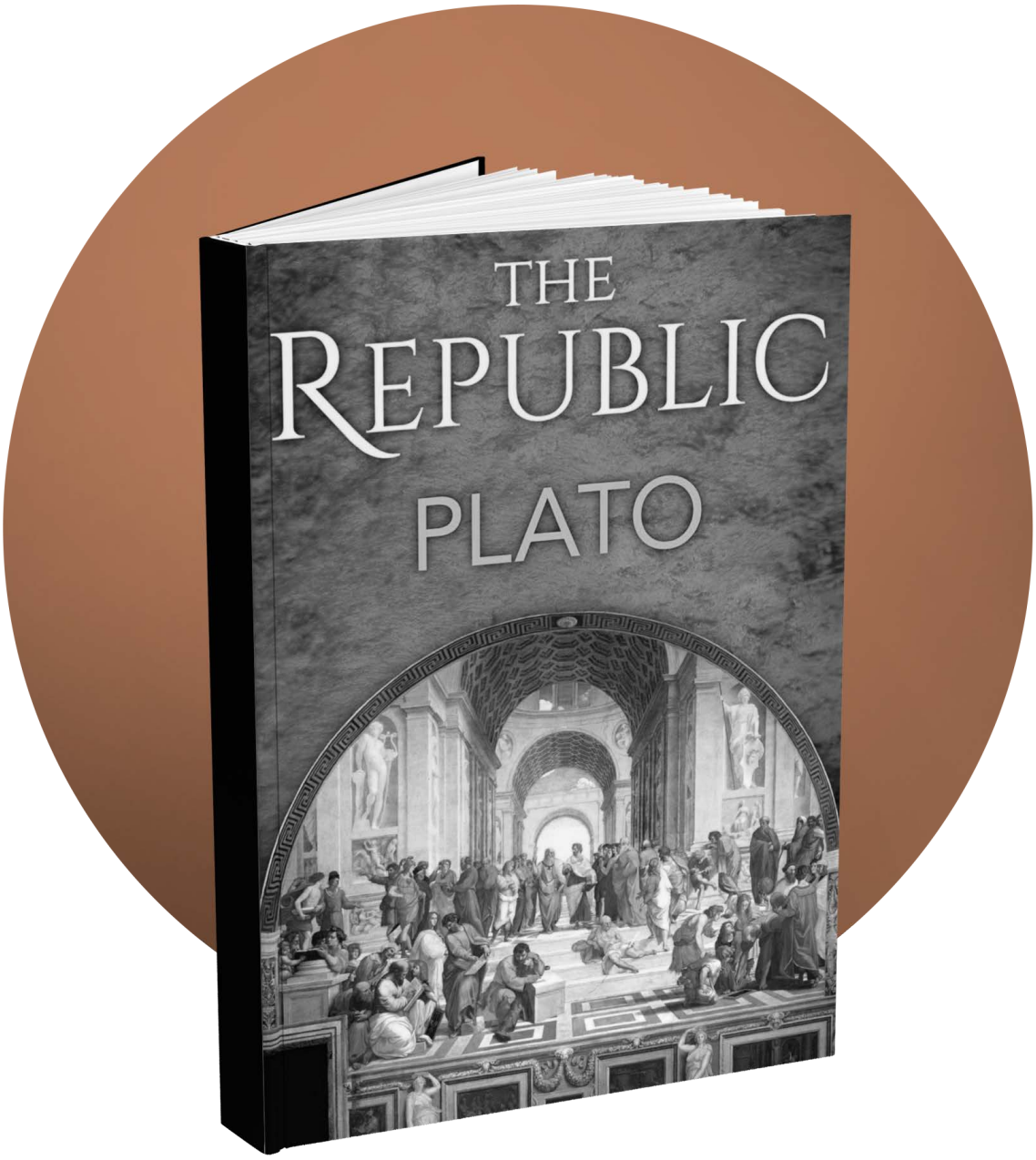
Thus, each "Self" preserves its own presence through refinement, attempts to diversify access through infinite combinations, requiring prioritization and therefore the dissolution of the superfluous in order to achieve the sublime, the joy of reaching the goal, these four angles

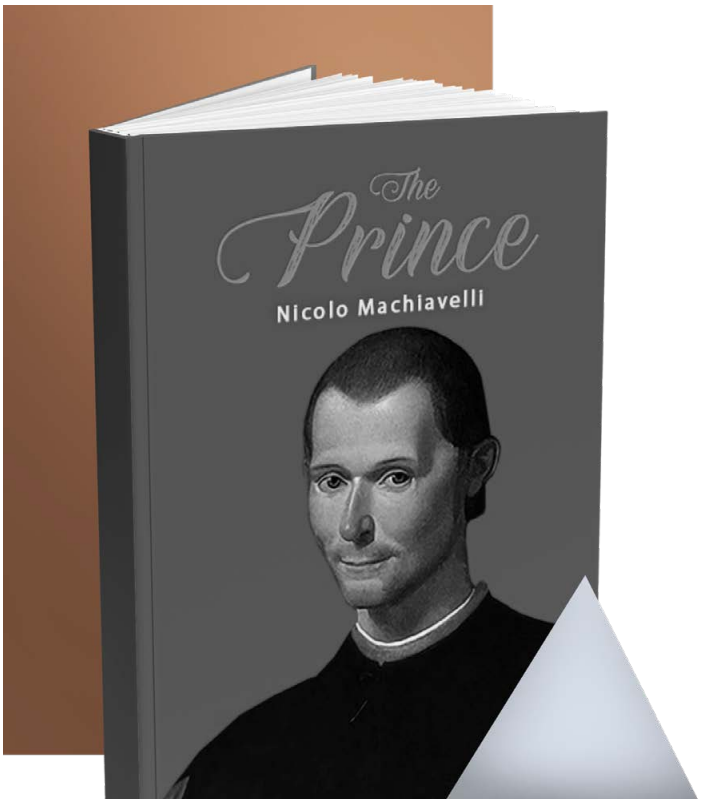
3 https://culturalstudiesnow.blogspot.com/2012/10/jean-baudrillard-precession-of.html

or tools being positive, acting towards objective well-being within the two orders, those of convention and originality, or becoming negative, aiming at their destruction in favor of a third order, that of Simulacrum, seeking, as Plato also indicates in The *Republic,* to prevent each Self from reaching and, above all, from being afraid to know the "truth," that is, not only the accuracy of what is, but also its ethical or universal meaning, so that the preservation of "self" is achieved through positive refinement and not through its opposite, the sophistry of selfishness, for example, a Polis that wants to see only its own isotropy in each extensive homothety of its Self-acting in the world of Politeia…

This means that such a "Self" proclaiming itself "polis," including among the Polis (e.g., mafias, corrupt groups) may want to negatively dissolve all persons and groups that disagree with it in order to preserve or even refine, but negatively, its power, to the point of considering that the negative diversification of their suffering is not enough, that it will therefore be necessary to dissolve them negatively, i.e., eliminate them… On the other hand, a Polis may want to preserve itself positively by specifically removing any politeia seeking to become a Polis, for example by dissolving any desire of non-citizens to constitute themselves as such in the first and second orders, imposing its language, its conventions, even its imagination and the codes for accessing it…

And to verify once again the effectiveness of this analysis with its four tools or angles testing the permanence of a Self of a Culture to be and not just to exist as folklore, we will now analyze the current war situation between Ukraine and Russia.





III. How to Put These Four Angles or Tools into Practice

We can see that each "Self" certainly wants to positively preserve its position, but this can be perceived negatively by the other party…

In this case, no universal or objective positivity can be achieved. How can we proceed? Let's take the situation in the Donbass. The prohibition or negative isotopic dissolution of the Russian language — or any other language (negative preservation and refinement)—cannot be universally positive. Even from the Ukrainian point of view, positive refinement cannot be fully achieved. As a result, the conflict begins and continues until the current secession, regardless of the fact that this situation can be exploited negatively by certain groups on both sides.

The situation is therefore not positive for either side if the cultural conflict between these two Selves turns into armed conflict. On the contrary, we are witnessing negative dispersion and dissolution rather than positive preservation and reinforcement of each country. War is accompanied not only by military actions but also by a cultural conflict around language: Kyiv attempts to promote the Ukrainian language while limiting the use of Russian, which has sparked debates about whether such measures exacerbate societal division and tension (The Times, 2025). Beyond military actions, there is an "existential cultural struggle" for identity. This includes the dismantling of monuments and disputes over the role of Russian culture and language, reflecting a deeper societal rift (Le Monde, 2025).

Furthermore, if each Self implicitly projects that its primary objective is to destroy the other and therefore chooses negative dissolution above all else, then the positivity achieved becomes relative in the sense that reinforcement is based solely on the destruction of the other and not on mutual benefit.

Admittedly, a certain type of negative "pleasure," a cruel joy, can be achieved when destruction is the main objective. This always provides the satisfaction of accomplishing an action (or Kant's principle of negative greatness) (Fugate, 2016), and thus of building both a certain recognition of being someone in one's own eyes and also of attracting a certain audience. It allows one to build a kind of spiritual power worldwide, particularly in the third order, that of Simulacrum, even if we did not want to. Even if someone told us, "we must destroy the stick of power and not just take it," destruction itself provides a certain pleasure and admiration for the gesture, and therefore for the victor (as it was said in the famous book *The Prince* by Machiavelli (1532/2008)), even if he did not want it. Hence the idea that, in any case, the positive

preservation of the Self — and its refinement — cannot be achieved, leading instead to negative dispersion and dissolution, and therefore to the inability to truly *be*, contenting oneself only with existing, with subsisting.

It is therefore interesting to note that even in this situation, the four tools for analyzing the development of self-esteem are effective, because we can see that even the criminal mind wants to preserve itself and is very enthusiastic about this idea.

This is why it is necessary to be in the field, as Oleg Maltsev was before he was arrested by certain people who, on the one hand, do not understand the scientific approach combining confidential studies in the field among all groups (Maltsev, 2020; Maltsev & Lopatiuk, 2023). On the other hand, these people are unsure of what they are doing, seeing in Oleg Maltsev's work a reflection of their own incomprehension, and his arrest a mirror of their anxiety, the scapegoat for their inability to be rather than merely exist in negative preservation and refinement.

It is as if they had noticed that something was wrong in this war, not only against Russian aggression, but also against the dialectic of the two cultural codes that constitute it. This explains why they arrested this researcher, thinking they were acting positively to reinforce their own preservation. In reality, they made a monumental mistake by "paranoiding" and thus moving toward a destructive position that was both negative refinement (stubbornness), negative diversity (accusations of everything and its opposite), and, finally, negative dissolution (arrest without trial), a premonitory prelude to their own disappearance as a positive subject of Universal History.

CONCLUSION

Human history shows that it is impossible to eradicate the dialectic of cultural codes (conventionality and originality, explicit and implicit, officially listed by constitutionally recognized structures…) through repression and murder, especially if it is still shared by many people; unless we kill them all in a kind of perpetual war until the last survivor, since codes are composed of and carried by various customs, ranging from politeness and good manners to the behavioral models of yesterday (fairy tales and legends) and today (soap operas, series, personal development).

Therefore, if preservation and positive refinement are the primary goals, it is necessary to work, in and for each Self, to organize as best as possible a diversity of first and second orders or cultural codes that are combined rather than opposed, because it is indeed the dialectic of conventionality *and* originality that allows *Polis* and *Politeia* to continue to enrich each other anthropologically, rather than confronting each other in a perpetual war, that of "all against all," which can only lead to disappearance, similar to all those displaced peoples…

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REFERENCES

Agamben, G. (2005). *State of Exception*. University of Chicago Press.

Amoore, L. (2013). *The Politics of Possibility: Risk and Security Beyond Probability*. Duke University Press.

Anderson, B. (1983). *Imagined Communities: Reflections on the Origin and Spread of Nationalism*. Verso.

Arendt, H. (1958). *The Human Condition*. University of Chicago Press.

Barry, B. (2001). *Culture and Equality: An Egalitarian Critique of Multiculturalism*. Harvard University Press.

Bourdieu, P. (1991). *Language and Symbolic Power*. Harvard University Press.

Castoriadis, C. (1987). *The Imaginary Institution of Society*. MIT Press.

Esposito, R. (2011). *Immunitas: The Protection and Negation of Life*. Polity Press.

Fugate, C. D. (2016). Kant and Leibniz on negative magnitudes. *Estudos Kantianos, 4*(2), 149–168. https://www.researchgate.net/publication/341335080_KANT_AND_LEIBNIZ_ON_NEGATIVE_MAGNITUDES

Geertz, C. (1973). *The Interpretation of Cultures*. Basic Books.

Mouffe, C. (2005). *On the Political*. Routledge.

Le Monde. (2025). *Culture in Ukraine: The other existential battle*. Retrieved December 1, 2025, from https://www.lemonde.fr/en/international/article/2025/02/23/culture-ukraine-s-other-existential-battle_6738479_4.html?utm_source=chatgpt.com

Machiavelli, N. (2008). *The Prince* (G. B. McLean, Trans.). Oxford University Press. (Original work published 1532)

Maltsev, O. (2020). Filosofiya yuga Italii [Philosophy of Southern Italy]. Serednyak T. https:// books.google.com.ua/books?vid=ISBN9786177822508

Maltsev, O., & Lopatiuk, I. (2023). War Crimes: Their Nature and Parameters. American Behav-ioral Scientist, 67(3), 358–370. https://doi.org/10.1177/00027642221145029 Mauceri, J. (2023, July 7).

Oleg Maltsev (psychologist). (n.d.). In *Wikipedia*. Retrieved December 1, 2025, from https://en.wikipedia.org/wiki/Oleg_Maltsev_(psychologist)#Arrest_and_Detention

Oulahbib, L. (2019). How can human action be assessed in terms of sustainable development of the Self? Contribution based on the work of Pierre Janet. *Annales Médico-Psychologiques, Revue Psychiatrique, 177*, 774–780. https://doi.org/10.1016/j.amp.2019.01.008

Taylor, C. (2004). *Modern Social Imaginaries*. Duke University Press.

The Times. (2025). *Muscovite language news in Ukraine: Cultural tensions and debates*. Retrieved December 1, 2025, from https://www.thetimes.com/world/russia-ukraine-war/article/muscovite-language-news-6gs980pf0?utm_source=chatgpt.com

Quote Investigator. (2017, March 23). *Insanity is doing the same thing over and over and expecting different results*. Retrieved December 1, 2025, from https://quoteinvestigator.com/2017/03/23/same/

ARTIFICIAL INTELLIGENCE AND ANCIENT GREEK THEATRE:

ATTIC DRAMA IN THE FOURTH INDUSTRIAL REVOLUTION

DR. ANDREAS MARKANTONATOS

UNIVERSITY OF THE PELOPONNESE

- *ORCID: https://orcid.org/0000-0003-3387-3863*
- *E-mail: markant@uop.gr*

Andreas Markantonatos is a leading scholar of ancient Greek Literature, internationally distinguished for his contributions to the study of Attic drama, narratology, and the intellectual history of Greek myth and religion. He is the author of numerous monographs, including *Tragic Narrative: A Narratological Study of Sophocles' Oedipus at Colonus, Oedipus at Colonus: Sophocles, Athens, and the World, and Euripides' Alcestis: Narrative, Myth, and Religion*, alongside a prolific body of articles and chapters exceeding 120 publications. He has edited major reference works, such as *Brill's Companion to Sophocles* and the two-volume *Brill's Companion to Euripides*, and serves as editor or co-editor of several scholarly series, including *PANTHEON of Ancient Greek Classics and SĒMATA: Contemporary Approaches to Ancient Greek Literature*. Professor Markantonatos has held a range of prominent academic leadership roles, directing postgraduate courses in Ancient and Modern Greek Philology, Moral Philosophy, and Performing Arts, and founding the Centre for Ancient Rhetoric and Drama (CARD). His work has been duly acknowledged with significant distinctions, including the Prize of the Academy of Athens and major research grants.

ABSTRACT

The rapid transformations of the Fourth Industrial Revolution have intensified debates about artificial intelligence, algorithmic governance and the future of human agency. This article proposes that ancient Attic drama, especially the tragedies of Sophocles and Euripides, provides a vital ethical grammar for interpreting these technological dilemmas. Treating the plays as dynamic modes of thought rather than cultural artefacts, the study develops a model of 'tragic humanism' to complement contemporary AI ethics. Through close reading and conceptual synthesis, it identifies four tragic frameworks: truth-seeking, conscientious resistance, mortality, and cognitive burden, that illuminate modern concerns about disinformation, authoritarian optimisation, life-extension technologies and mental overload. While not offering direct solutions, this article argues that tragic thought cultivates ethical sensibilities essential for navigating the uncertainties of the algorithmic age and affirms the continuing relevance of classical Greek theatre as a philosophical interlocutor in twenty-first-century technological life.

Keywords

artificial intelligence, greek tragedy, attic drama, tragic humanism

INTRODUCTION: CLASSICAL THOUGHT IN AN AGE OF ACCELERATION

To speak of artificial intelligence in the early decades of the twenty-first century is to speak of a technological landscape defined by an unprecedented fusion of biological, physical and computational domains, a constellation of transformations already identified as emblematic of the Fourth Industrial Revolution (Schwab, 2016, 2017). The speed with which advanced AI systems have transformed communication, labour, politics, warfare, healthcare and cognition continues to unsettle established conceptual boundaries (Harari, 2015; Tegmark, 2017). We increasingly inhabit a world in which human decision-making is supplemented, altered or even replaced by algorithmic processes; in which the structures of knowledge are reorganised by machine-produced outputs; and in which

the lines separating the artificial from the organic, the simulated from the real, the automated from the voluntary, become progressively more difficult to identify. Such transformations demand an equally rigorous interpretive and ethical response (Floridi, 2014).

It is striking that many of the most influential thinkers of the Fourth Industrial Revolution, among them Klaus Schwab, Nick Bostrom, Max Tegmark, Yuval Noah Harari and Luciano Floridi, recurrently gesture toward classical antiquity as a reservoir of concepts capable of clarifying the moral and political stakes of the present technological moment (Bostrom, 2014; Floridi, 2014; Harari, 2016). The rediscovery of ancient categories such as *hubris, technē, logos* and *sōphrosynē* within discussions of AI ethics reflects not nostalgia but something more demanding: an intuition that the dilemmas of the digital age echo, at a structural level, the tensions that animated classical thought (Vernant & Vidal-Naquet, 1990). For while the technological circumstances of classical Athens bear little resemblance to those of the twenty-first century, the ethical, political and psychological problems explored in Greek drama, namely truth, authority, justice, mortality, freedom, responsibility, retain profound relevance (Nussbaum, 1986).

Ancient Greek tragedy in particular offers a unique vantage point from which to approach the challenges of the AI era. Unlike philosophical treatises that present systematic arguments, tragedy articulates ethical and political questions through narrative embodiment and performative intensity, allowing audiences to witness the collision of values and the limits of human foresight (Goldhill, 1986). Tragic protagonists occupy situations of extreme tension in which competing values collide and in which actions unfold within opaque networks of causality that neither they, nor their societies, fully comprehend (Dodds, 1951). To read tragedy is to encounter a mode of thought that resists simplification and refuses to present dilemmas in the form of easily solvable problems. It is this resistance to closure, explicitly this awareness of the limits of human understanding, that renders tragedy a productive partner for contemporary reflections on AI (Hall, 2010).

This article argues that Attic drama can contribute to the development of a distinctive ethical sensibility, what I call *tragic humanism*, capable

of addressing certain blind spots in current AI discourse. While debates in AI ethics often place emphasis on transparency, fairness, accountability, privacy and risk mitigation (O'Neil 2016), they do not always attend to deeper questions of existential vulnerability, epistemic humility, incomplete knowledge, conflict between values and the fragility of civic life (Arendt, 1958). Tragedy, by contrast, foregrounds precisely these aspects of the human condition. Through its exploration of the tensions between aspiration and limitation, intention and consequence, power and responsibility, tragedy calls into question any overconfident belief in the possibility of total control, whether of the self, of society or of technology (Seaford, 1994).

In what follows, I propose to examine four classical tragedies, *Oedipus Tyrannus, Antigone, Alcestis* and *Bacchae*, as case studies for understanding key dilemmas of the algorithmic age. Each play encapsulates a particular dimension of the contemporary technological predicament. *Oedipus Tyrannus* dramatises the risks inherent in the pursuit of truth, especially when knowledge challenges personal and civic identity (Knox, 1957). *Antigone* raises questions about authority, justice and resistance, illuminating the ethical conflicts that arise when decision-making becomes bureaucratised or automated (Honig, 2013). *Alcestis* interrogates the ethics of mortality and sacrifice, offering insights relevant to life-extension technologies and posthuman aspirations (Segal, 1993; Markantonatos, 2013). *Bacchae* explores the psychological consequences of excessive rational control and the need for intermittent release, providing a lens through which to understand cognitive overload in a hyper-connected world (Dodds, 1960; Markantonatos, 2025).

Though I do not suggest that classical tragedy can offer straightforward answers to problems such as algorithmic bias, surveillance capitalism, autonomous weapons or the political consequences of deepfake technologies, I maintain that tragedy provides something essential: a way of thinking about technology that refuses to divorce technical questions from their ethical, psychological and civic dimensions (Zuboff, 2019). It asks us to contemplate what it means to be human under conditions of radical uncertainty. It encourages patience, humility and attentiveness, qualities often overshadowed by the speed and scale of technological innovation. Tragic humanism thus serves as an intellectual counterweight to the sometimes utopian and sometimes nihilistic narratives that dominate discussions of AI (Vallor, 2016).

RESEARCH METHODOLOGY

In accordance with the interpretive traditions of classical studies and the stylistic conventions of humanities scholarship, this study adopts a comparative hermeneutic methodology aimed at elucidating the resonance between ancient tragic thought and contemporary debates in AI ethics. The approach is interdisciplinary, drawing upon literary analysis, political theory, philosophy of technology and ethical inquiry, yet it remains anchored in a close reading of the primary texts (Goldhill, 1986; Hall, 2010). This is not a project of analogy-hunting but of conceptual illumination.

The primary methodological principle is that tragedy be treated not merely as literature but as a form of thinking, namely a mode of philosophical inquiry embedded in narrative, performance and civic ritual. By examining the dramaturgical structures, character dynamics and thematic tensions of the selected plays, I seek to uncover how tragedy stages fundamental dilemmas of human existence that persist across historical epochs (Vernant & Vidal-Naquet, 1990). This analysis is then placed in dialogue with contemporary discussions of artificial intelligence, not in order to impose anachronistic interpretations upon the ancient texts, but to show how classical thought can assist in articulating the ethical and political stakes of technological modernity (Floridi, 2014; O'Neil, 2016).

A second methodological element is conceptual mapping. This involves identifying structural parallels between tragic themes and contemporary technological concerns. Such parallels do not imply equivalence; rather, they illuminate shared patterns of tension, conflict and uncertainty (Nussbaum 1986). When Oedipus' relentless pursuit of truth confronts him with the shattering revelation of his identity, we encounter a dramatic exploration of the ethical costs of knowledge, an issue that resonates with contemporary fears surrounding data harvesting, algorithmic inference and the erosion of privacy (Zuboff 2019). When Antigone challenges Creon's decree, we witness a confrontation between individual conscience and institutional authority that parallels current debates concerning the opacity of "black-box" algorithmic systems (Pasquale, 2015). When Alcestis sacrifices herself so that Admetus may live, Euripides invites reflection on the ethics of extending life at another's expense, a tension mirrored in modern discussions of life-extension technologies and the socio-economic inequalities they may exacerbate (Bostrom, 2014).

When Pentheus attempts to suppress the Dionysian rites in *Bacchae*, we see the dangers of rigid rational control, which anticipates contemporary questions about cognitive overload and the psychological costs of technological acceleration (Dodds, 1951; Crary, 2013).

The third methodological component is philosophical synthesis. Drawing upon the work of contemporary philosophers, including Martha Nussbaum on the fragility of goodness, Hannah Arendt on truth and politics, Shoshana Zuboff on surveillance capitalism, and Floridi on information ethics, I construct a theoretical framework for what I call *tragic humanism* (Nussbaum 1986; Arendt 1958; Floridi 2014; Zuboff 2019). This framework lays much stress upon human vulnerability, epistemic humility and the necessity of ethical responsibility in conditions of uncertainty. It aims to complement existing AI governance frameworks, which often prioritise technical solutions at the expense of broader ethical reflection (Yeung, 2017).

The final methodological aspect is cross-disciplinary integration. The argument proceeds in dialogue with fields such as cognitive science, human-computer interaction, political philosophy and digital sociology, not in order to force interdisciplinary homogenisation but to reveal the multifaceted nature of the problems at stake. Questions concerning the design, deployment and regulation of AI systems cannot be fully understood without attending to the psychological, cultural, philosophical and historical dimensions that shape how human beings relate to technology (Harari, 2015; Vallor, 2016).

RESULTS AND DISCUSSION

1. Ancient Drama in the Age of Algorithms: Sophocles' Oedipus Tyrannus and Antigone

The emergence of the Fourth Industrial Revolution has prompted scholars to reconsider how ancient intellectual traditions might contribute to our understanding of technological modernity (Schwab, 2016, 2017). As societies confront the ethical and political challenges posed by AI, the classical world offers not merely historical instruction but a mode of conceptual clarity shaped by its own encounters with uncertainty, power and human limitation (Floridi, 2014). Among the cultural forms of classical Athens, tragedy stands out as particularly relevant. Performed at civic festivals before thousands of citizens, tragedies served as communal spaces for deliberating some of the most difficult questions confronting the polis. They were not didactic lectures but living enactments of moral and political conflict (Goldhill, 1986; Hall, 2010).

The civic function of tragedy is essential to understanding its relevance to the algorithmic age. Unlike modern ethical debates, which often occur within academic, corporate or governmental institutions, Athenian drama took place in the open, before a heterogeneous public composed of citizens from different classes and backgrounds (Vernant & Vidal-Naquet, 1990). The theatre thus served as a space where collective anxieties could be articulated, contested and partially resolved through dramatic performance. It offered the citizenry a means of reflecting upon the tensions inherent in democratic life, including those surrounding authority, justice, responsibility and the role of divine or unseen forces (Nussbaum, 1986).

Contemporary technological life shares, in a philosophical sense, this condition of uncertainty. AI systems increasingly operate as opaque forces shaping social, political and economic outcomes in ways that may be as inscrutable to the ordinary citizen as divine intervention was to the Athenian audience (Zuboff, 2019). The algorithmic structures that influence elections, determine creditworthiness, allocate social services or recommend media content operate at a scale and speed that make them difficult to comprehend, let alone regulate (O'Neil, 2016; Pasquale, 2015). In this respect, the tragic world, in which protagonists confront forces beyond their understanding, mirrors the lived experience of individuals navigating an increasingly automated order.

The tragic imagination, then, offers an interpretive vocabulary through which to grasp the ethical tensions of technological transformation. What tragedy provides is not predictive insight but a mode of thinking attuned to ambiguity, complexity and the limits of human control (Dodds, 1951). The Greek tragedians possessed a keen understanding of how knowledge, even when pursued with noble intentions, can weaken the individual and threaten the cohesion of the community; they knew that authority, when exercised without humility or accountability, can mutate into tyranny; they acknowledged the ethical ambiguity inherent in attempts to manipulate or evade the conditions of mortality; and they understood, perhaps more clearly than any subsequent cultural tradition, that the human psyche cannot endure unremitting rationality

without descending into fragmentation (Vernant & Vidal-Naquet, 1990; Nussbaum, 1986). For these reasons, ancient drama is uniquely positioned to illuminate the dilemmas produced by artificial intelligence, for AI technologies threaten to displace, obscure or distort precisely those aspects of the human condition that tragedy so powerfully dramatizes.

One might argue that the comparison between ancient drama and modern technology risks romanticising the former or distorting the latter. Yet the point is not to claim that Greek tragedy anticipates AI in any literal sense, but that the tragic worldview cultivates an ethical disposition capable of addressing the ontological instability and epistemic uncertainty introduced by contemporary technologies (Floridi, 2014; Vallor, 2016). In an era when algorithmic processes can predict, nudge or manipulate human behaviour, and when the complexities of AI systems far exceed the capacities of individual understanding, the tragic recognition of human limitation becomes an essential counterpart to the optimistic narratives often promoted by technological progressivism (Bostrom, 2014; Harari, 2015; Tegmark, 2017). The tragic imagination resists both naïve faith in technological salvation and alarmist prophecies of disaster. It urges instead a grounded realism, a recognition that human beings must act ethically within conditions of uncertainty, that action always entails risk, and that wisdom often emerges not from mastery but from the acceptance of limitation (Arendt, 1958).

It is with these principles in mind that we may now turn to the first of the four tragedies under consideration, Sophocles' *Oedipus Tyrannus*, a drama that explores the ethics of knowledge in a world where truth is both necessary and dangerous. Of all the plays of the ancient world, *Oedipus Tyrannus* has most captured the imagination of later philosophers, psychoanalysts, novelists and theorists (Knox, 1957; Markantonatos, 2002). Its exploration of identity, truth, self-discovery and civic responsibility has rendered it an inexhaustible source of reflection. In the context of AI, however, one feature of the play appears particularly salient: Oedipus' determination to uncover the truth at any cost, even when the truth threatens to annihilate the very foundations of his identity and authority. The tragedy unfolds as an investigation, viz. an inquiry undertaken by a man who believes in rational explanation, causal reconstruction and the power of human intelligence to dispel darkness. Yet the deeper Oedipus probes, the more the truth escapes his interpretive grasp, until it finally reveals itself with devastating clarity.

What interests us here is not the psychoanalytic dimension of the Oedipus myth but the intellectual and ethical stance Oedipus embodies. He is a figure of unyielding epistemic commitment, a man who refuses to accept complacent myths or comforting evasions. Even when Jocasta warns him that the pursuit of truth may bring ruin, he insists on knowing. Sophocles thus confronts us with the paradox of truth: it is indispensable for justice and self-understanding, yet it can also undermine the very structures of meaning that hold individual and collective life together (Goldhill, 1986). In this sense, the play offers a powerful reflection on the ethics of knowledge in an age governed by information technologies.

Artificial intelligence presents contemporary society with a parallel dilemma. On the one hand, AI promises unprecedented access to information, the ability to model complex systems and the capacity to predict outcomes with an accuracy previously unimaginable. On the other hand, the same systems that generate knowledge may also distort it, conceal it or make it accessible only to those who control the underlying algorithms (Zuboff, 2019; O'Neil, 2016). Oedipus' insistence on truth stands in stark contrast to the algorithmically curated worlds of personalised feeds, targeted misinformation, synthetic media and predictive profiling (Pasquale, 2015). Whereas Oedipus seeks to uncover an objective reality independent of his desires, today's digital systems increasingly shape our perceptions of reality according to behavioural data, commercial incentives and political interests.

The tragic force of *Oedipus Tyrannus* thus resides in its portrayal of truth as an ethical imperative rather than a commodity. Oedipus does not pursue knowledge in order to expand outcomes or increase efficiency. He does so because truth possesses intrinsic value, because a life grounded in illusion is incompatible with the dignity of moral agency (Nussbaum, 1986). His self-blinding at the end of the play, far from representing a rejection of truth, signifies his refusal to inhabit a world sustained by deception. It is a gesture of fidelity to the truth even when it destroys him. In the context of AI, where truth is increasingly subject to manipulation, commodification and algorithmic distortion, Sophocles' play reminds us that knowledge possesses an ethical dimension that cannot be reduced to data or computation.

Yet the story of Oedipus also warns that knowledge, especially when pursued without sufficient humility, can become destructive. Oedipus' confidence in his rational capacities blinds him to the possibility that his interpretation of evidence may be flawed, that his agency may be entangled in forces beyond his understanding. This *hubris* underscores a crucial limitation of human intelligence and, by extension, of technological intelligence: the belief that complete knowledge is attainable and that mastery of information equates to mastery of fate (Dodds, 1951). AI systems, particularly those grounded in predictive modelling and data inference, often project an aura of objectivity and omniscience. Yet, as scholars such as Zuboff, Cathy O'Neil and Frank Pasquale have argued, the opacity of these systems conceals profound uncertainties and ethical risks (Zuboff, 2019; O'Neil, 2016; Pasquale, 2015). The tragic lesson of Oedipus suggests that the pursuit of knowledge must be accompanied by an awareness of its limits, that epistemic humility is essential in contexts where information shapes individual lives and collective futures.

This lesson bears directly upon debates concerning algorithmic transparency, explainability and the governance of automated decision-making. If AI systems operate as modern oracles, namely entities whose predictions influence financial markets, judicial rulings, hiring practices, medical diagnoses and political campaigns, then the integrity of the truth they produce becomes a matter of public concern (Pasquale, 2015). Just as the citizens of Thebes sought clarity from the Delphic oracle but misinterpreted its cryptic language, modern societies risk misplacing their trust in algorithmic outputs that appear authoritative but may conceal bias, error or manipulation (O'Neil, 2016). Sophocles thus anticipates one of the central ethical dilemmas of AI: how to pursue truth without succumbing to the illusion that truth is easily obtained, perfectly transparent or devoid of moral consequence.

It is precisely this tension between authority, legitimacy and interpretation that lies at the heart of Sophocles' *Antigone*, the second tragedy examined in this study. Whereas *Oedipus Tyrannus* dramatizes the dangers of epistemic ambition, *Antigone* exposes the perils of political overconfidence. Creon, newly installed as ruler of Thebes, issues an edict forbidding the burial of Polyneices, whom he regards as a traitor. His decree is grounded in a desire to preserve civic order and assert political authority. Antigone, by contrast, obeys what she perceives as a higher moral law, refusing to accept the legitimacy of a command that violates familial loyalty and religious duty (Nussbaum, 1986; Butler, 2000). The conflict between Creon and Antigone is not merely a clash of personalities but an exploration of the limits of political authority, the nature of justice and the role of dissent in civic life (Honig, 2013).

The relevance of *Antigone* to debates on artificial intelligence becomes clearer when we consider the increasing reliance of governments, corporations and public institutions on algorithmic systems to exercise authority. In many contemporary contexts, decisions once made by human beings are now delegated to automated processes. Predictive policing algorithms determine areas of surveillance and resource

distribution; automated risk assessments influence judicial sentencing; credit-scoring systems decide access to financial opportunity; recommendation algorithms shape political discourse; welfare agencies use machine learning to detect alleged fraud (O'Neil, 2016). These systems are often presented as neutral, objective and efficient, yet their operation can obscure the moral, political and social values embedded within their design (Pasquale, 2015; Zuboff, 2019).

Creon's confidence in the rationality of his decree mirrors the technocratic faith placed in algorithmic governance. He believes that his decision follows logically from the requirements of civic order and that dissent threatens the stability of the city. Similarly, modern algorithmic systems are often defended on the grounds that automated decision-making reduces human error, eliminates bias and enhances predictability. Yet, as scholars have extensively demonstrated, algorithms can encode and perpetuate forms of injustice that remain invisible precisely because they are couched in the language of objectivity (O'Neil, 2016; Pasquale, 2015). Antigone's act of resistance thus becomes emblematic of the ethical necessity to question, challenge and, when appropriate, oppose systems of authority that operate without sufficient transparency or accountability.

What makes *Antigone* particularly relevant to AI ethics is not merely its portrayal of unjust authority but its representation of the tragic consequences that arise when authority becomes impermeable to dialogue. Creon's downfall does not stem from malice but from a refusal to listen, that is, from an insistence that dissent is equivalent to disorder (Hall, 2010). In this sense, *Antigone* invites reflection on the importance of contestability in technological systems. If AI systems are to play a central role in governance, they must remain open to challenge, review and revision. Citizens must have the right to understand how decisions are made and to appeal decisions that adversely affect them. The tragic conflict between Antigone and Creon thus underscores the ethical imperative that technological authority remain subordinate to human judgement and democratic deliberation (Arendt, 1958).

At the same time, *Antigone* also complicates simplistic narratives of resistance. Antigone's unwavering commitment to her cause raises questions about the relationship between personal conviction and collective responsibility. Her defiance is morally admirable, yet it also threatens civic order. The tragedy does not endorse one perspective over the other; rather, it exposes the irreconcilability of two ethical frameworks. This irreconcilability is central to the concept of tragic humanism. In many contemporary debates about AI, we encounter similar tensions between the values of innovation and caution, efficiency and justice, progress and dignity. Like tragedy, AI ethics must grapple with dilemmas that admit no perfect solutions (Vernant & Vidal-Naquet, 1990; Nussbaum, 1986).

2. Ancient Drama in the Age of Algorithms: Euripides' Alcestis and Bacchae

The article now moves to consider *Alcestis*, where Euripides confronts the ethical implications of altering the boundaries of life and death; a theme that resonates deeply with contemporary aspirations toward life extension, genetic enhancement and posthuman transformation (Bostrom, 2014). Yet before turning to Euripides' exploration of mortality, it is necessary to note that tragedy often exposes the costs of pursuing what appears beneficial. Whether the goal is truth, order or longevity, classical drama compels us to ask: at what point does the pursuit of a good become a source of harm? It is this question, perhaps more than any other, that makes Greek tragedy an indispensable companion to the ethical challenges of the Fourth Industrial Revolution.

The concerns explored in Sophocles' *Oedipus Tyrannus* and *Antigone* converge in Euripides' *Alcestis*, a drama whose emotional and philosophical resonance has often been overshadowed by the more politically charged tragedies of the fifth century but which, in the context of contemporary technological life, may be the most relevant of all (Nussbaum, 1986; Segal, 1993). If *Oedipus Tyrannus* examines the dangers inherent in the pursuit of truth, and *Antigone* interrogates the rigidity of authority confronted with moral dissent, *Alcestis* turns its attention to the most fundamental of all human conditions: mortality. Euripides' play presents a world in which death is not merely an inevitable event but a negotiable term, an economy in which life may be extended if another agrees to die in one's place. The premise appears at once fantastical and ethically disturbing, and it is precisely this combination that makes the play so relevant to debates concerning life-extension technologies, biomedical enhancement and posthumanism's aspirations emerging in the early twenty-first century (Bostrom, 2014; Harari, 2015).

The plot of *Alcestis* is deceptively simple. Admetus, king of Pherae, has been granted

the privilege of escaping death if he can find another to die in his stead. His parents refuse the honour; his wife Alcestis volunteers. Her decision is presented neither as coerced nor as entirely voluntary, but as a complex mixture of duty, loyalty, love and resignation. She offers her life so that her husband may live, and the tragedy unfolds as a meditation on the emotional, social and ethical implications of her choice. The climax arrives when Heracles, moved by the hospitality Admetus shows him even in grief, rescues Alcestis from death and returns her to the living. Yet the ending, though joyous in tone, remains ethically ambiguous. Alcestis' sacrifice has revealed the darker dimensions of Admetus' character; the apparent restoration of harmony obscures the trauma that preceded it (Segal, 1993).

Modern readers often struggle with the moral logic of *Alcestis*. Why should Admetus be permitted to circumvent mortality at the expense of another? Why should Alcestis be expected to sacrifice herself? Why should the mythical apparatus of divine intervention validate such an arrangement? These questions take on new urgency in a world increasingly committed to the possibility of extending life through advanced medical technologies, genomic editing, regenerative therapies and AI-assisted diagnostics (Harari, 2015). The play anticipates, in mythological form, the ethical dilemmas that arise when mortality becomes subject not to fate but to human engineering (Bostrom, 2014).

In contemporary debates on bioethics and transhumanism, advocates of radical life extension often frame mortality as an outdated biological limitation, a technical problem awaiting a technical solution (Bostrom, 2014). Scholars such as Bostrom envision a future in which human beings may transcend their evolutionary constraints, achieving not merely longer lives but qualitatively enhanced forms of existence. Yet critics have warned that such visions risk obscuring the ethical, social and political consequences of altering the structure of life and death (Vallor, 2016). Who will have access to life-extension technologies? How will such technologies transform familial, social and intergenerational relationships? What happens to the meaning of responsibility, of sacrifice, of love, of grief, when the boundary between life and death becomes negotiable?

Alcestis suggests that attempts to extend life inevitably implicate others. Admetus' survival depends on the sacrifice of his wife. Although he expresses grief, his acceptance of her offer reveals a troubling moral asymmetry. He values his own life more than the lives of his parents, whom he unsuccessfully implores to die in his place. The play thus exposes the self-interest that can underlie the desire to overcome mortality (Nussbaum, 1986). Even the miraculous restoration of Alcestis does not erase the revelation of Admetus' weakness. Euripides forces the audience to confront the unsettling possibility that the desire to exceed biological limits may mask a profound moral failure: the refusal to accept the vulnerability and finitude that define human life.

This theme resonates with contemporary fears that life-extension technologies may exacerbate existing inequalities. If only the wealthy or technologically privileged have access to enhancements, the division between those who can afford longevity and those who cannot may deepen social stratification (Zuboff, 2019). Moreover, if longevity becomes the norm for certain segments of the population, the generational transfer of political, cultural and economic power may be disrupted in ways that undermine democratic institutions. In *Alcestis*, the social and familial order is watered down by the substitution of one death for another. While the play itself does not provide a clear moral verdict, it draws attention to the relational consequences of altering mortality.

Yet perhaps the most profound insight of *Alcestis* lies in its recognition that mortality is not simply a biological fact but a condition that structures meaning. Without death, responsibility loses its urgency, relationships lose their depth and choices lose their weight. If a life can be indefinitely prolonged, if sacrifice becomes optional, if suffering can be reversed at will,

then the very qualities that make human life ethically significant (its fragility, its temporality, its openness to loss) may be diminished (Nussbaum, 1986; Vallor, 2016). Euripides thus offers a cautionary perspective on the contemporary fascination with posthuman transformation. To seek immortality may be to misunderstand the nature of the human good.

The next tragedy under consideration, *Bacchae*, explores a different dimension of the human condition: the tension between rational control and ecstatic release. If modern technological life is haunted by cognitive overload, information saturation and the relentless pressure of expansion, then the psychological dynamics portrayed in *Bacchae* provide a powerful lens through which to understand the consequences of suppressing human needs that exceed rational explanation (Crary, 2013). Euripides' play centres on the conflict between Pentheus, the rigidly rational and authoritarian king of Thebes, and Dionysus, the god of ecstasy, liberation and ritual madness. Pentheus' refusal to acknowledge the divine nature of Dionysus and his attempt to suppress the Dionysian rites lead to his catastrophic downfall, culminating in his dismemberment by his own mother and the women of Thebes, who are driven into a frenzied state by the god (Dodds, 1960).

Scholars have long interpreted *Bacchae* as a meditation on the dangers of denying or repressing the irrational dimensions of human experience (Vernant & Vidal-Naquet, 1990). Pentheus' worldview is branded by an insistence on order, discipline and control. He seeks to regulate behaviour, suppress disorder and uphold a rigid conception of civic propriety. Dionysus represents the opposite: the force of disruption, the eruption of the unconscious, the transformative power of ritual, music, intoxication and collective frenzy. The tragedy unfolds as an allegory of the human psyche, dramatizing the catastrophic consequences that ensue when one dimension of human nature, rationality, attempts to dominate and eliminate another (Dodds, 1960).

In the context of the Fourth Industrial Revolution, the conflict between Pentheus and Dionysus mirrors the tensions experienced by individuals navigating an environment dominated by digital technologies. Modern life is saturated with stimuli: notifications, alerts, messages, advertisements, metrics and algorithmic predictions that demand constant attention. Cognitive theorists and cultural critics have documented the effects of such hyperconnectivity on the human mind, noting increased anxiety, reduced attention span and an almost continuous state of mental exhaustion (Crary, 2013). Digital systems, designed to enhance engagement and productivity, impose patterns of interaction that leave little room for rest, reflection or unstructured experience.

Pentheus embodies the mindset that prizes efficiency, control and rationality above all else. He cannot comprehend why his citizens seek refuge in Dionysian ecstasy, why they abandon their tasks and duties for ritualised experiences of release. His inability to distinguish the psychological necessity of such experiences ultimately leads to his destruction. In a similar manner, contemporary technological culture often undervalues the importance of rest, slowness and contemplative practices. The logic of augmentation infiltrates all aspects of life, from work to leisure to personal relationships. Human beings are encouraged to become self-rearming subjects, constantly measuring, improving and expanding their capacities (Zuboff, 2019).

Yet as *Bacchae* demonstrates, the human psyche cannot sustain perpetual rationality. Ritual, ecstasy and symbolic participation are not archaic residues of a pre-rational past but essential components of human flourishing (Vernant & Vidal-Naquet, 1990). Dionysus does not merely disrupt; he restores balance by reintroducing dimensions of experience that Pentheus would suppress. The tragedy suggests that any system, be it political, social or technological, that ignores the need for psychological interruption courts disaster. In the context of AI, this insight translates into an understanding that technological systems must be designed in ways that respect human cognitive limits (Crary, 2013). A society that subjects its citizens to continuous data flow, algorithmic upgrading and digital compulsion risks producing a condition akin to the Dionysian frenzy, not as liberation but as overload.

As with *Oedipus Tyrannus* and *Antigone*, the ethical relevance of *Bacchae* is not confined to its narrative. Rather, the play offers a profound reflection on the nature of human cognition, the importance of identifying the limits of rational control and the need for psychological balance in an increasingly machine-oriented world (Dodds, 1960). The tragedy does not advocate irrationality; instead, it insists that rationality must be tempered by an acknowledgment of the forces that lie beyond the reach of reason. In the age of AI, when technological systems can measure, predict and manipulate behaviour with unprecedented precision, the balance between rational

control and Dionysian release becomes an urgent ethical question

THE VIRTUES OF TRAGIC HUMANISM

§ At this point, having examined the four tragedies in depth, we may begin to discern the contours of what I call *tragic humanism*, a way of thinking that integrates the insights of classical drama with the ethical challenges posed by contemporary artificial intelligence. Tragic humanism acknowledges the precarity and vulnerability of human and nonhuman agencies (Nayar, 2019), the complexity of ethical decision-making and the irreducible uncertainty that typifies human life (Nussbaum, 1986; Vernant & Vidal-Naquet, 1990). It rejects the notion that technical solutions can resolve moral dilemmas and cautions against the *hubris* of assuming that technological mastery equates to ethical wisdom. It accentuates humility, responsibility, attentiveness and the need for ongoing dialogue (Arendt, 1958; Vallor, 2016).

The tragedies examined in this study collectively articulate a vision of the human condition grounded in vulnerability rather than control, in relationality rather than isolation, in ethical ambiguity rather than moral certitude. *Oedipus Tyrannus* teaches that the pursuit of truth, though noble, must be tempered by humility. *Antigone* teaches that authority must remain open to challenge and that justice cannot be reduced to procedural legality. *Alcestis* teaches that attempts to circumvent mortality inevitably implicate others and that the desire for immortality may undermine the ethical foundations of human life. *Bacchae* teaches that rational control must be balanced by recognition of the psychological dimensions of existence (Dodds, 1951; Nussbaum, 1986).

In the contemporary technological landscape, such insights are indispensable. Artificial intelligence promises unprecedented levels of prediction, enhancement and efficiency, yet these promises come with profound ethical risks (O'Neil, 2016; Zuboff, 2019). The tragedies remind us that human beings are not merely data points or enrichment problems but complex, vulnerable and interdependent agencies whose lives unfold under conditions of uncertainty. The tragic worldview thus offers a counterpoint to the technological imaginary that seeks to render human life fully predictable, controllable and improvable (Floridi, 2014).

Tragic humanism does not call for the rejection of technology. Rather, it calls for an ethical orientation that acknowledges the limits of technological mastery and the need to preserve the conditions under which human dignity can flourish (Arendt, 1958). It urges us to ask how technology can serve, rather than diminish, the values that define human life: justice, truth, freedom, responsibility and the capacity for meaningful relationship. It insists that ethical deliberation must accompany technical innovation, that vulnerability must inform design and that humility must guide policy (Vallor, 2016; Pasquale, 2015).

This philosophical synthesis prepares the ground for the final sections of the article, which will draw together the implications of the tragic analysis and articulate a continuous, discursive reflection on the results and conclusions appropriate to a fully humanistic treatment of AI ethics. The emergence of tragic humanism as a conceptual framework for understanding the ethical tensions of the Fourth Industrial Revolution reflects the enduring capacity of classical literature to illuminate questions that transcend historical boundaries. The tragedies of Sophocles and Euripides, though shaped by the religious, political and social contexts of fifth-century Athens, address dilemmas that resonate profoundly with the challenges posed by contemporary artificial intelligence (Hall, 2010). They confront us with the limits of knowledge, the fragility of authority, the complexity of moral choice, the inevitability of death and the pressures exerted upon the human mind by forces that exceed rational comprehension. These concerns, far from being relics of ancient thought, have become central to our contemporary technological experience.

As artificial intelligence becomes increasingly integrated into the fabric of daily life, the question of how to think ethically about its design, deployment and governance grows ever more urgent. Contemporary discussions often focus on technical criteria such as transparency, fairness, accuracy, privacy and security. While these criteria are unquestionably important, they do not exhaust the ethical landscape (O'Neil, 2016; Floridi, 2014). They tend to assume that ethical problems can be formulated in technical terms and resolved through improved design or regulation. Yet tragedy invites us to acknowledge that many dilemmas cannot be reduced to such equations. They involve conflicts between values that cannot be reconciled, situations in which any available choice carries costs, contexts in which knowledge is incomplete and consequences unforeseeable. Tragic humanism therefore articulates an ethical sensibility rather than a prescriptive programme.

It encourages us to acknowledge the limitations of both human and technological agency and to cultivate virtues appropriate to a world plagued by uncertainty.

The first of these virtues is epistemic humility. Oedipus' determination to uncover the truth is admirable, yet his downfall illustrates the dangers of presuming that knowledge is easily obtained or that its consequences can be anticipated. In an era in which AI systems are capable of generating vast quantities of information and making predictions with formidable accuracy, the temptation to equate information with understanding becomes intense. But the data-driven worldview, like Oedipus' confidence in his interpretive abilities, can obscure the limits of what such information can reveal. Predictive algorithms may detect patterns invisible to human perception, yet they do not provide the kind of contextual, narrative and ethical understanding that tragic drama assigns to truth (Nussbaum, 1986). The tragic perspective thus reminds us that information must be interpreted, that interpretation is fallible and that ethical judgement cannot be automated.

The second virtue that emerges from tragic humanism is attentiveness to moral plurality. *Antigone* illustrates how conflicts arise not because one side is morally right and the other morally wrong, but because both are committed to incommensurable values. Creon seeks to uphold civic order; Antigone seeks to honour familial and divine obligations (Butler, 2000; Honig, 2013). The tragedy demonstrates that justice cannot be reduced to procedural correctness

or algorithmic calculation, and that political authority must remain open to dissent even when it appears disruptive. In the context of AI, this insight challenges the belief that decision-making can be fully delegated to machinic processes. An ethical society requires forums in which conflicting values can be articulated, contested and negotiated. Algorithmic authority, if left unchecked, threatens to erode this pluralism by enforcing uniformity under the guise of neutrality (Pasquale, 2015; O'Neil, 2016).

A third virtue, illuminated most clearly by *Alcestis*, is an awareness of relational responsibility. The desire to transcend mortality through technological innovation must be considered not only in terms of individual benefit but in terms of its impact on others. Euripides exposes the moral asymmetry inherent in Admetus' acceptance of Alcestis' sacrifice. Her death, though framed as voluntary, reveals the social cost of granting one individual the privilege of escaping death (Segal, 1993; Nussbaum, 1986). In contemporary debates on life-extension and enhancement technologies, a similar concern arises: who will bear the burden of sustaining the lives of those who choose to prolong them? How will extended longevity affect the distribution of resources, the structure of families, or the organisation of labour? Euripides suggests that any attempt to circumvent mortality must be evaluated in light of its relational implications, for human life is woven from interdependence rather than isolated striving (Vallor, 2016).

The fourth virtue, articulated through *Bacchae*, is an appreciation of psychological balance. Pentheus' insistence upon total rational control, his failure to understand the importance of ritual, joy and ecstatic release, leads to personal and civic destruction (Dodds, 1960). His downfall warns against the dangers of suppressing dimensions of human experience that resist quantification. In the digital age, branded by incessant connectivity, perpetual engagement and algorithmic augmentation, the need for cognitive rest becomes ever more pressing

(Crary, 2013). AI systems that operate by capturing attention and stimulating compulsive behaviour threaten to produce a condition not unlike the frenzy induced by Dionysus, albeit one stripped of *mythic transcendence* (Zuboff 2019). Tragedy teaches that human flourishing requires space for contemplation, for unstructured activity, for absorption into beauty and for forms of experience that cannot be programmed or predicted (Vernant & Vidal-Naquet, 1990).

These virtues, namely humility, pluralism, relational awareness and psychological balance, form the ethical core of tragic humanism. They do not provide definitive answers to the dilemmas posed by artificial intelligence. Rather, they shape a mode of thinking that is familiar with the complexity of such dilemmas and resists the reduction of ethical life to computation. They call for an ethics grounded not in the illusion of mastery but in an acknowledgement of our shared vulnerability. They urge us to approach technological innovation with caution rather than fear, enthusiasm rather than naivety and responsibility rather than fatalism (Arendt, 1958; Vallor, 2016).

CONCLUSIONS

From the standpoint of cultural history, the reappearance of tragic themes in contemporary technological discourse suggests a deeper continuity between ancient and modern forms of thought. Classical tragedy emerged in a period of rapid social, political and intellectual transformation. The rise of democratic institutions, the development of natural philosophy, the growth of imperial ambition and the emergence of sophistic rhetoric generated profound uncertainties concerning the nature of human agency (Vernant & Vidal-Naquet, 1990; Hall, 2010). The tragedies of the fifth century BCE dramatize these uncertainties, offering the Athenian audience a means of exploring the psychological and political pressures of their own moment. Today, as we confront transformations no less significant, i.e. digital automation, data extraction, algorithmic governance and biotechnological enhancement, the tragic imagination once again becomes essential (Floridi, 2014; Zuboff, 2019).

What distinguishes tragedy from other genres is its refusal to resolve the conflicts it portrays. It acknowledges that certain dilemmas cannot be solved but only endured, that ethical life consists not in the elimination of conflict but in the capacity to navigate it with dignity (Nussbaum, 1986). This recognition has particular relevance for debates concerning AI, where the desire for technical solutions can eclipse the need for ethical judgement. The tragic perspective cautions against the belief that improved algorithms will eliminate bias, that more data will dispel uncertainty or that more sophisticated machines will relieve humans of the burden of responsibility. On the contrary, tragedy teaches that human beings must continue to exercise judgement precisely because technology cannot replace it (O'Neil, 2016; Pasquale, 2015).

In the final analysis, the contribution of tragic humanism to AI ethics lies in its capacity to reframe the moral landscape. It shifts the focus from narrow technical concerns to broader reflections on the conditions under which human beings can lead meaningful, dignified lives in a technologically mediated world. It challenges us to ask not only whether a system functions efficiently but whether it promotes justice, sustains community, preserves dignity and acknowledges vulnerability (Arendt, 1958; Floridi, 2014). It invites us to cultivate a civic culture capable of resisting the forces that seek to reduce human life to data, labour to metrics, citizenship

to behavioural prediction and morality to algorithmic constraint (Zuboff, 2019).

If the Fourth Industrial Revolution presents unprecedented opportunities for human flourishing, it also presents unprecedented risks (Schwab, 2016; Tegmark, 2017). The tragedies of Sophocles and Euripides do not offer blueprints for managing these risks, but they provide indispensable insights into the human condition that any viable ethical framework must incorporate. They remind us that knowledge can be dangerous, that authority can become destructive, that the desire to escape death can reveal moral weakness and that the suppression of psychological needs can lead to catastrophe. They insist that we acknowledge the fragility of our condition and approach the future with both courage and humility.

To read tragedy in the age of artificial intelligence is to acknowledge that the dilemmas we face are not entirely new. They are variations of ancient questions: What does it mean to know? What does it mean to rule? What does it mean to live? What does it mean to die? The technologies we create may transform the context in which these questions arise, but they do not abolish the questions themselves. The tragic imagination, by confronting these questions with honesty and intensity, provides a vital resource for navigating the complexities of our technological age (Nussbaum, 1986).

Tragic humanism, therefore, should be integrated not only into academic discourse but also into public policy, technological design and civic education. It should inform how we teach engineering students to think about ethics, how we encourage legislators to reflect on the long-term consequences of technological regulation, how we engage corporate leaders in questions of responsibility and how we raise and cultivate public awareness of the social and psychological dimensions of technological innovation (Vallor, 2016; Floridi, 2014). It invites us to admit that the future of artificial intelligence is not only a technological challenge but an ethical, cultural and existential one.

The Humanities, long thought marginal in an era dominated by STEM disciplines, thus regain central importance. For instance, classical studies, philosophy, literature, history and the arts offer insights that cannot be generated by technical analysis alone. They provide the vocabulary, the narratives and the interpretive frameworks through which we understand and explore what it means to be human. As AI systems become more powerful, the Humanities will become not less but more essential, for they safeguard the values that technological and machine systems cannot generate such empathy, reflection, meaning, beauty, dignity and freedom (Arendt, 1958; Hall, 2010).

The tragedies of ancient Greece continue to speak because they address the enduring tensions of the human condition. They remind us that our aspirations toward knowledge, power and longevity must be tempered by an acceptance of our vulnerability, and that our attempts to master the world must be guided by an awareness of the limits of that mastery. In an age when artificial intelligence promises to reshape every aspect of life, the tragic imagination offers a vital ethical compass. It reminds us that to be human is not to transcend limitation but to live responsibly within it.

The dialogue between artificial intelligence and ancient drama is, therefore, not a matter of historical curiosity but a necessary engagement between two modes of understanding the world. By reading the present through the lens of the past, we gain the perspective required to navigate a future that remains uncertain. Tragic humanism does not promise salvation, but it offers guidance. It teaches us how to live with uncertainty, how to act responsibly in the face of ambiguity, and how to preserve humanity in a world increasingly shaped by AI machines. In this sense, the tragedies of Sophocles and Euripides are not merely artistic masterpieces but indispensable companions in the age of artificial intelligence.

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Note

This study aims to explore how ancient Greek tragedy can serve as a conceptual and ethical resource for understanding the challenges posed by contemporary artificial intelligence. It argues that tragic thought, through its distinctive portrayal of human limitation, moral ambiguity and the fragile interplay between knowledge, authority

and agency, can illuminate the dilemmas produced by rapid technological advancement. By juxtaposing classical texts with current technological debates, the paper seeks to enrich AI ethics with insights drawn from the humanities, thereby constructing a richer interdisciplinary framework for evaluating the implications of the Fourth Industrial Revolution.

REFERENCES

Agrawal, Ajay, Joshua Gans, and Avi Goldfarb (2018). *Prediction Machines: The Simple Economics of Artificial Intelligence*. Harvard Business Press.

Ahrensdorf, Peter J. (2009). *Greek Tragedy and Political Philosophy: Rationalism and Religion in Sophocles' Theban Plays*. Cambridge University Press.

Anderson, Michael, and Susan Leigh Anderson (2011). *Machine Ethics*. Cambridge University Press.

Arendt, Hannah (1958). *The Human Condition*. University of Chicago Press.

Bauman, Zygmunt (2000). *Liquid Modernity*. Polity.

Bennett, Jane (2010). *Vibrant Matter: A Political Ecology of Things*. Duke University Press.

Bernabé, Alberto (2010). *Dioniso. Il dio, il culto, il mito*. Il Saggiatore.

Bostrom, Nick, and Anders Sandberg. "Cognitive Enhancement: Methods, Ethics, Regulatory Challenges." *Science and Engineering Ethics* 15.3 (2009): 311–341. doi: 10.1007/s11948-009-9142-5

Bostrom, Nick (2014). *Superintelligence: Paths, Dangers, Strategies*. Oxford University Press.

Buchanan, Allen (2011). *Better than Human: The Promise and Perils of Enhancing Ourselves*. Oxford University Press.

Cairns, Douglas (1992). *Aidōs: The Psychology and Ethics of Honour and Shame in Ancient Greek Literature*. Oxford University Press.

Cartledge, Paul (2012). *Ancient Greek Political Thought in Practice*. Cambridge University Press.

Coeckelbergh, Mark (2020). *AI Ethics*. MIT Press.

Collins, Derek (2004). Master of the Game: Competition and Performance in Greek Poetry. The Center for Hellenic Studies. https://chs.harvard.edu/read/collins-derek-master-of-the-game-competition-and-performance-in-greek-poetry/ Accessed 29 November 2025.

Crary, Jonathan (2013). *24/7: Late Capitalism and the Ends of Sleep*. Verso.

Crawford, Kate (2021). *Atlas of AI: Power, Politics, and the Planetary Costs of Artificial Intelligence*. Yale University Press.

Dennett, Daniel C. (2017). *From Bacteria to Bach and Back: The Evolution of Minds*. W. W. Norton & Company.

Dodds, Eric R. (1951). *The Greeks and the Irrational*. University of California Press.

Dreyfus, Hubert L. (1992). *What Computers Still Can't Do: A Critique of Artificial Reason*. MIT Press.

Easterling, P. E., and Bernard Knox (1985). (eds.). *The Cambridge History of Classical Literature, Vol. 1: Greek Literature*. Cambridge University Press.

Euben, Peter J. (1990). *The Tragedy of Political Theory: The Road Not Taken*. Princeton University Press.

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

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

Foley, Helene P. (2001). *Female Acts in Greek Tragedy*. Princeton University Press.

Foucault, Michel. (1995). *Discipline and Punish. The Birth of the Prison*. Translated by Alan Sheridan. Vintage Books.

Giddens, Anthony (1990). *The Consequences of Modernity*. Stanford University Press.

Goldhill, Simon. (1986). *Reading Greek Tragedy*. Cambridge University Press.

Goldhill, Simon. (2012). *Sophocles and the Language of Tragedy*. Oxford University Press.

Habermas, Jürgen. *The Theory of Communicative Action. The Critique of Functionalist Reason*. Vol. 1. Beacon Press, 1984.

Hall, Edith, and Fiona Macintosh (2005). *Greek Tragedy and the British Theatre 1660–1914*. Oxford University Press.

Hall, Edith (2010). *Greek Tragedy: Suffering Under the Sun*. Oxford University Press.

Harari, Yuval Noah. (2016). *Homo Deus: A Brief History of Tomorrow*. Harvill Secker.

Henrichs, Albert. "Loss of Self, Suffering, Violence: The Modern View of Dionysus from Nietzsche to Girard." *Harvard Studies in Classical Philology* 88 (1984): 205–240. doi: https://doi.org/10.2307/311453

Honig, Bonnie. (2013). *Antigone, Interrupted*. Cambridge University Press.

Jouanna, Jacques (1999). *Greek Medicine from Hippocrates to Galen*. Brill.

Kurzweil, Ray. (2005). *The Singularity Is Near. When Humans Transcend Biology*. Viking.

Latour, Bruno. (1993). *We Have Never Been Modern*. Translated by Catherine Porter. Harvard University Press.

Loraux, Nicole. (2002). *The Mourning Voice: An Essay on Greek Tragedy*. Translated by Elizabeth Trapnell Rawlings. Cornell University Press.

Manovich, L. (2002). *The language of new media*. MIT Press.

Markantonatos, A. (2025). Euripides' *Bacchae* and Athenian democratic ideology: An interpretation. In A. Markantonatos, M. Betiu, & D. Kosmopoulou (Eds.), *Contemporary perspectives on Greek theatre* (pp. 94–103). UNATC Press.

Markantonatos, A. (2013). *Euripides' Alcestis: Narrative, Myth, and Religion*. De Gruyter.
Markantonatos, A. (2007). *Oedipus at Colonus: Sophocles, Athens, and the World*. De Gruyter.
Markantonatos, A. (2002). *Tragic Narrative: A Narratological Study of Sophocles' Oedipus at Colonus*. De Gruyter.
Mastronarde, Donald J. (2010). *The Art of Euripides: Dramatic Technique and Social Context*. Cambridge University Press.
Moravec, Hans. (1988). *Mind Children: The Future of Robot and Human Intelligence*. Harvard University Press.
Nagy, Gregory. *The Best of the Achaeans. Concepts of the Hero in Archaic Greek Poetry*. Johns Hopkins University Press, 1998.
Nayar, Pramod. *Ecoprecarity. Vulnerable Lives in Literature and Culture*. Routledge, 2019.
Nussbaum, Martha C. (1986). T*he Fragility of Goodness: Luck and Ethics in Greek Tragedy and Philosophy*. Cambridge University Press.
O'Neil, Cathy. (2016). *Weapons of Math Destruction. How Big Data Increases Inequality and Threatens Democracy*. Crown Publishing.
Pasquale, Frank. (2015). *The Black Box Society: The Secret Algorithms That Control Money and Information*. Harvard University Press.
Powers, Thomas (2017). (ed.) *Philosophy and Computing: Essays in Epistemology, Philosophy of Mind, Logic, and Ethics*. Springer.
Russell, Stuart. (2019). *Human Compatible: Artificial Intelligence and the Problem of Control*. Viking.
Sandel, Michael J. (2007). *The Case Against Perfection: Ethics in the Age of Genetic Engineering*. Harvard University Press.
Segal, Charles. (1982). *Dionysiac Poetics and Euripides' Bacchae*. Princeton University Press.
Shannon, Claude E. "A Mathematical Theory of Communication." *The Bell System Technical Journal* 27 (1948): 379–423. https://people.math.harvard.edu/~ctm/home/text/others/shannon/entropy/entropy.pdf
Simon, Bennett. (1978). *Mind and Madness in Ancient Greece: The Classical Roots of Modern Psychiatry*. Cornell University Press.
Sloterdijk, Peter. *You Must Change Your Life*. Polity, 2013.
Taplin, Oliver. *Greek Tragedy in Action*. Routledge, 20022.
Tegmark, Max (2017). *Life 3.0: Being Human in the Age of Artificial Intelligence*. Alfred A. Knopf.
Thaler, Richard H., and Cass R. Sunstein. (2008). *Nudge: Improving Decisions About Health, Wealth, and Happiness*. Yale University Press.
Turkle, Sherry. (2011). *Alone Together: Why We Expect More from Technology and Less from Each Other*. Basic Books.
Vernant, Jean-Pierre, and Pierre Vidal-Naquet (1988). *Myth and Tragedy in Ancient Greece*. Zone Books.
Vidal-Naquet, Pierre. (1986). *The Black Hunter: Forms of Thought and Forms of Society in the Greek World*. Johns Hopkins University Press.
Zeitlin, Froma I. (1995). *Playing the Other: Gender and Society in Classical Greek Literature*. University of Chicago Press.
Žižek, Slavoj (2018). *Living in the End Times*. Verso.
Zuboff, Shoshana. (2019). *The Age of Surveillance Capitalism: The Fight for a Human Future at the New Frontier of Power*. PublicAffairs.

PRIVACY, SECURITY, AND LIABILITY ISSUES IN A CONNECTED WORLD

DR. IZHAR HAQ

SCHOOL OF PROFESSIONAL ACCOUNTANCY,
LONG ISLAND UNIVERSITY

- *ORCID: https://orcid.org/0009-0007-1141-6203*
- *Email: izhar.haq@liu.edu*

Izhar Haq is the director of the School of Professional Accountancy at Long Island University. He served as deputy controller at Florida International University for 10 years. He has over 20 years of accounting experience in senior positions in multinational corporations as well as governmental and not-for profit entities and is a consultant for the Oil and Gas Industry as well as start-up incubators in New York. His publications have appeared in *The CPA Journal, Journal of Finance* and *Accounting*, and *Tennessee CPA Journal.*

CO-AUTHORS

Michael Abatemarco
Long Island University
Michael Abatemarco is a professor of accounting, law, and taxation at the School of Professional Accountancy at Long Island University. He is also a practicing tax attorney whose firm is based in Garden City, New York. He articles have appeared in *The CPA Journal, Today's CPA,* and *The Bankruptcy Strategist Journal.*

Ed Weis
Long Island University
Ed Weis is a professor of management at the School of Business at Long Island University. He has a Ph.D. from University of Georgia and a J.D. and a Master of Accounting from University of Tennessee as well as a Graduate Certificate from Harvard University. He has decades of investment banking experience and served as Managing Director of Investment Banking at Merrill Lynch. He has also served as a Dean of Business at Molloy College and Vice President of Academic Affairs at Long Island University.

ABSTRACT

The proliferation of the Internet of Things (IoT) devices has resulted in the generation of enormous amounts of data in a connected world. The technical challenges of dealing with this enormous volume of data is dwarfed by significant privacy, security, and liability concerns. By extending standard models of information disclosure through integrating persuasion and legal aspects, we offer novel insights into the shape of future information technology systems. Specifically, we expect that artificially intelligent machines will allow organizations to decentralize parts of their information technology at the device level. However, such a new approach to a connected world requires careful investigation of these issues. Three case studies are used to analyze privacy and liability issues by employing an information disclosure model.

Keywords
big data, disclosure, information asymmetry, persuasion, privacy, security, liability, artificially intelligent machine, privacy preserving analytics, information system, internet of things, IoT, information technology, connected

INTRODUCTION

Estimates of the potential growth of the Internet of Things (IoT) over the next decade vary considerably in both size and economic impact. At the lower end, Gartner Group estimated that the IoT is expected to grow to more than 30 billion devices by 2020 (Gartner, 2013). Cisco Systems, a global provider of Internet technology, estimated that in 2012 there were 8.7 billion objects connected to the Internet and that by the year 2020 this number could reach 50 billion and would generate US$14 trillion in profits

for the world economy over the next ten years — more than the combined 2011 GDP of the seventeen member countries of the European Union (Rooney, 2013). The rapid emergence of the IoT poses not only technical but also societal and legal challenges. On the technical side, IoT-connected devices will contribute to the ongoing growth of data collected and transmitted (Gubbi et al. 2013). On the legal side, both privacy and liability issues are of concern. Without understanding the implications of deploying and using the IoT, companies and individuals might put themselves at risk of unforeseen exposure.

This study explores whether the emergence of IoT should change the design of information systems in organizations. What are the arguments in favor of or against a new approach to the information systems and what will it look like and what will its basic requirements be? Answers to these questions are important because artificially intelligent (AI) machines, such as smart devices and smart robots, use increasingly more artificial intelligence. Naturally, this leads to the question regarding what role management will play in future organizations and what impact this will have on information technology within and across organizations. We try to answer these questions by advancing a theoretical framework that is founded on information disclosure.

Our model shows that two key developments will likely affect the future of information technology. First, the interaction of humans and machines and the role information technology plays is expected to change as more data is processed and evaluated at the periphery of the organization. We expect information disclosure to become more selective, as too much information might overwhelm managers, and selective information is expected in facilitate decision making processes. A key aspect is how, for example, a smart device can persuade a manager to make an optimal decision by presenting only the most important and relevant information. Second, information technology is expected to serve not only humans but also machines. AI machines are expected to take over certain decision-making tasks from human managers. Third, decentralized information technology can be implemented at the machine level. Hence, in the context of the IoT, it will be possible to combine the roles of manager and information systems at the AI machine-level. Thus, the future direction of information technology offers a departure from traditional design.

There is no doubt that IoT will substantially change how we live and how our economies operate. The only question is how quickly the IoT is going to change how we do things. A standard view is that the IoT connects billions of devices. However, such a high level of connectivity is not sufficient to truly have a profound impact on society and business. Rather, it is the emergence of ever smarter AI machines that will have a profound impact on daily activities and interactions between humans and machines. This is a significant change only comparable to the great industrial revolution that changed how we produced and transported goods. This Internet revolution will affect every aspect of our daily lives, including how we monitor our health, how we drive, how we manage and operate buildings, just to state a few. At the heart of this revolution is not the Internet per se but the intelligent machine or smart device. This machine has built-in processing ability that allows the processing of data or information and, possibly, the execution of certain actions. The functional abilities of the device depend on the hard and soft components the device is built from.

Our work is related to several strands of the literature. Research about the Internet has focused on different aspects of improving electronic services and the underlying infrastructure. On the economic side, the focus has been on the pricing of Internet services (Hosanagar et al. 2008) and the economic benefits of the Internet by decreasing prices (Brown and Goolsbee, 2002), reducing search costs (Bakos, 1997; Sankaranarayanan and Sundararajan, 2010) and shared information goods (Bakos, 1999). Our extended theoretical model of information disclosure is founded on classic work in information economics, particularly that by Akerlof (1970), Spence (1973), and Stiglitz (1975).

The findings of this study suggest that the future information technology is deployed not only in a more decentralized fashion but also at the machine level. This is driven by the deployment of AI machines, such as smart devices and robots, that take over certain roles that have previously been the sole domain of management. Second, analyzing and interpreting data at the machine level has major implications for how we disclose information and how we apply and interpret privacy and liability law. Machines per se are not legal entities and, as such, cannot be liable for their decisions or actions. Hence, either owners or operators will have to assume responsibilities for bad decisions at the machine level. Third, advances in materials science and nanoscience as well as innovations in production processes will

merge human and machine. This will create real challenges for the application of current approval processes for equipment. Artificially intelligent machines in the human body raise not only serious privacy, security and liability issues but also considerable ethical issues.

This study makes three key contributions. First, we contribute to the information systems theory-building literature by developing a theoretical framework in the context of IoT. This framework combines standard arguments from information economics with privacy and liability aspects from legal theory to offer novel insights into the interaction of senders and receivers of information. Importantly, the model shows that when privacy and liability concerns are classified as costs, the value of information disclosure can be reduced. Second, we contribute to the literature on decision making by managers. Specifically, we highlight that AI machines are expected to assume decision-making tasks previously reserved exclusively to human managers. Like human managers, we argue that AI machines will require information systems to solve decision tasks. Third, we contribute to the information technology design literature by moving it to the periphery. We show how the placement at the AI machine-level can mitigate privacy and potential liability concerns of organizations operating within the domain of the IoT and how such information technology can serve both humans and AI machines.

The remainder of the paper is structured as follows. The next section defines the IoT and sets the boundaries for our model. The following section develops the theoretical framework, building on design and agency theories. This section also establishes the framework for the interaction of devices and humans and the role of information systems in it. In addition, it investigates the relationship between information disclosure, privacy issues and liability. This section is followed by three case studies that analyze the various aspects of the theoretical framework developed. This section also offers future directions of research as well as some limitations of the present investigation. The final section concludes the study.

METHODS

This study employs a **conceptual analytical approach** to examine the implications of the Internet of Things for information disclosure, privacy, and liability. Given the emergent and rapidly evolving nature of IoT technologies, the research does not rely on empirical data collection but instead focuses on theory development and analytical reasoning.

The analysis is based on the construction of a **theoretical framework** that models information disclosure between interacting entities, including humans and artificially intelligent machines. The framework abstracts from specific technologies and organizational settings in order to identify general mechanisms governing information granularity, selectivity, and associated costs. Privacy and liability considerations are incorporated as constraints that influence the value and desirability of information disclosure.

To explore the applicability of the framework across different contexts, the study uses **illustrative case analyses** drawn from typical IoT application domains. These cases serve to demonstrate how decentralized, machine-level information systems can affect decision-making processes and mitigate or amplify privacy and liability risks. The cases are used analytically rather than empirically and are intended to highlight patterns and implications rather than to provide statistical generalization.

Overall, the methodological approach emphasizes abstraction, internal consistency, and analytical clarity, with the goal of generating insights that can inform future empirical research and the design of information systems in IoT environments.

IOT IN CONTEXT

The IoT is a newly emerging technology and, as such, is a concept that is still being defined. It has been described as "fuzzy" and "fragmented" with a "complexity that is not bounded by geographical, political, administrative or cultural borders" (Golling and Stelte, 2011). The first use of the term "Internet of Things" is generally attributed to Kevin Ashton, the Director of the MIT Auto-ID Center, who referenced it in a presentation he delivered to Procter & Gamble in 1999 (Ashton, 2009). The International Telecommunications Union (ITU) subsequently legitimized the term when they published the first report on the topic, entitled "The Internet of Things," in November 2005 (Santucci 2010). The phrase was recently adopted as a "new word" in the Oxford English Dictionary in August 2013, where it was defined as "noun — a proposed development of the Internet in which everyday

objects have network connectivity, allowing them to send and receive data (Oxford, 2013)."

The combination of IoT-enabled devices and telecommunications technologies is allowing the bridging of "objects" or "things" in the physical world, such as furniture and appliances, to the virtual world of databases and software applications. It can also facilitate the exchange of information between objects, including machine-to-machine (M2M), machine-to-human (M2H), machine-to-human-to-machine (M2H2M), and human-to-human (H2H) (Tan and Wang, 2010). Future MIS will see a shift in the interaction between these parties where machines transgress to AI machines or devices. While a "machine" can be a device in the form of sophisticated sensors (Kendall and Kendall, 1993), an AI machine is a device that in fact uses algorithms with artificial intelligence to analyze data. Unless otherwise specified, "machine" in this article refers to the latter — AI machine. Such a device is, as such, independently able to produce some type of information, and while it may presently be described as lacking sophistication in the information that a human can generate, it is only a matter of time before this can in fact be achieved. Language is illustrative of this point — raw data are akin to words. Stringing together a meaningful sentence and sending it to another party requires a degree of artificial intelligence. Using complex algorithms, AI machines have already managed to speak sentences (e.g., natural voice creation, such as AT&T Natural Voices™ and Acapela Voice Factory). It will be increasingly difficult to differentiate between human and machine. Increasingly, data that are being collected through these interactions are being analyzed using new "big data" analytic software (Chen, Chiang and Storey, 2012). In addition to aiding human planning and decision-making, it also raises major concerns about social issues including privacy, security, and liability issues precipitated by the use of the data.

Inherent in the concept of the IoT is the understanding that objects will need to be connected and able to communicate via the Internet. To do this, the objects will have to be uniquely identified using an assigned Internet Protocol (IP) address. By the introduction of the IPv6 standard, for example, the IoT can become enormous, and it is no longer limited by a lack of Internet addresses. Global standards need to be established to allow complete connectivity or "interoperability" among devices to completely achieve the "ubiquitous" or "pervasive" network envisioned under the concept of the Io T.

Like the current Internet, the future IoT will be self-configuring and ever evolving. This means that, like current personal computers, many worldwide users will purchase and deploy new IoT-enabled devices daily, and many of these devices will be mobile — popping up and disappearing from the network — similar to laptops and iPads at Starbucks around the world today. When IoT-enabled objects become connected to the Internet and can share their information with other Internet-connected objects, they become endowed with a certain level of intelligence and are subsequently often referred to as "smart" objects or devices. We discuss these and other smart devices as well as their potential societal benefits and costs in greater detail below.

In June 2013, The Economist Intelligence Unit surveyed 779 senior business leaders and established an IoT business index (The Economist, 2013). The results of the survey showed that over three-quarters of companies are either actively exploring or using the IoT and that three years from now, almost all respondents (96%) expect their businesses to be using the IoT in some respect. However, if business leaders see the IoT as such as an important development, should there be concern about what information technology looks like? Specifically, should information systems experts and scholars be concerned about this change?

There are some skeptics. For example, Robin Duke-Woolley, CEO of Beecham Research, noted in December 2012 that the "Growth rate projections are often far too high for what is essentially a solutions business, not a consumer products business…The forecast errors for these are potentially huge" (Cowan, 2012). Subsequently, in July 2013, Ben Rooney, a tech columnist for the Wall Street Journal, in an article entitled "Internet of Things Poses Big Questions," analyzed both IoT's short-term concerns and long-term potential. He quoted one source as saying "The hype that is going around about IoT at the moment feels incredibly similar to the hype approximately 2000" (referring to the first dot-com boom and collapse) but then goes on to note that the "IoT was most likely another example of Amara's Law: We tend to overestimate the effect of a technology in the short run and underestimate the effect in the long run" (Rooney, 2013).

Despite these concerns, many political leaders have embraced the IoT and view its potential for social development and economic growth in a positive light. At the same time, they express caution regarding the impact of big data and analytics through the excessive use of IoT-connected devices on national security. In June 2010, the European Parliament officially endorsed the development of the IoT and called on the European Commission (EC) to "secure co-financing for the implementation of these technologies" and "continue funding pilot projects" (EU Commission Task Force, 2010).

While encouraging IoT development, the resolution also directed the EC to perform an exhaustive survey of the effects of this technology on "health, privacy and data protection" to ensure that they collect EU citizen input on possible public policy concerns (EU Commission Task Force, 2010). One way to address these concerns is to investigate how AI machines could be used to mitigate these concerns and how this would affect the design of future MIS. Complex systems can sometimes also be highly connected, enabling the sharing of information and the distribution of power. In political decision-making environments, such phenomena can allow more people at lower levels of society to participate in the policy making process. This can be good because it can strengthen system resilience; however, it can also increase societal complexity and raise questionable legal consequences related to privacy, security and liability. Finally, complex systems are self-organizing, meaning that no entity designs or controls it, and the system can autonomously adapt to changing conditions (Geyer and Rihani, 2010).

In a public policy and regulatory context, complex systems have several positive attributes. Their connectivity and self-organizing characteristics that facilitate information sharing can help improve situational awareness and problem solving (Lier, 2013). Through emergence and coevolution, complex systems can also foster innovation by bringing together information and ideas and creating unexpected positive outputs. On the negative side, complex systems can disseminate false information and can result in leadership overload with too much unfiltered information complicating the policy making process. This can lead to policy ambiguity, feeding public uncertainty and anxiety about the future.

There are several tools and techniques that complexity scientists use to test their theories (Lewin, 2000). These tools include agent-based modeling, network analysis, data mining, scenario modeling, and sensitivity analysis. In many ways, the IoT is the perfect metaphor for complexity theory. As described, the IoT is a network system composed of many parts. It is an emerging technology that will self-organize, grow and evolve over the next few years, likely creating new innovations and leaving unexpected consequences in its wake. Furthermore, its evolution and growth will be closely tied to similarly complex political and economic systems, resulting in potential risks and complicated policy issues, which will be discussed in the next section. Anticipated societal rewards and possible unanticipated consequences will also be described below.

RESULTS AND DISCUSSION

Theory

In theory, the Internet can be defined as an artifact (Orlikowski and Iancono, 2001; Benbasat and Zmud, 2003), as it is at the intersection of "physical objects and human knowledge" (Gregor and Jones, 2007). The design of a new MIS requires a better understanding of the interaction of technological systems and social systems (Lee, 2001). The theoretical model is presented in Figure 1. The theoretical framework is prescriptive, and as such, it is a special predictive case (Gregor 2006). It consists of three building blocks: (1) the foundations of information disclosure; (2) persuasion and information disclosure; (3) and legal aspects of information disclosure.

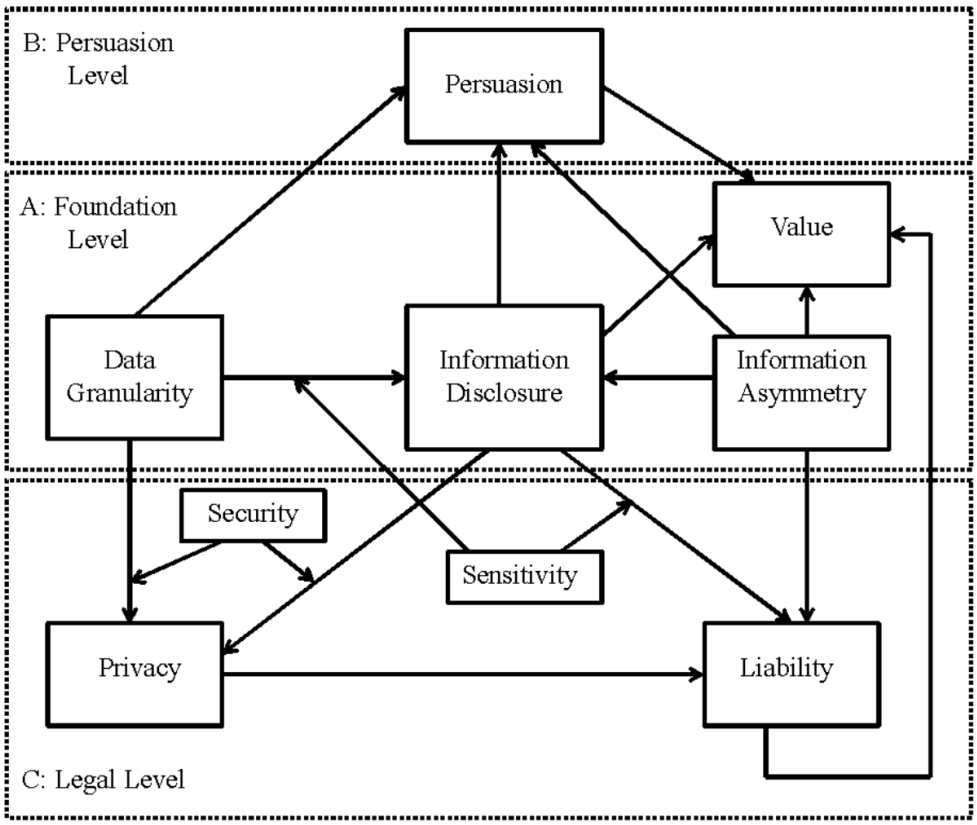

Figure 1: Theoretical Framework of Information Disclosure

Foundations of Information Disclosure

At the center of our model lies information disclosure (see Figure 1, region A). In the IoT, data are collected via sensors or devices operated by humans. Information disclosure can occur in two ways: (1) as raw data or (2) as processed data that have been transformed into information. This information is organized and structured and helps the manager in the decision-making process. The information-economic perspective helps in understanding the value of the information disclosed that has been transmitted from the sender to the receiver. For decision making, the fineness theorem by Blackwell states that more information, i.e., information with greater granularity, is at least worth as much as the subset of this set of information (Marschak and Radner, 1972). In economics, the theorem plays an important role in agency problems and situations with asymmetric information (Akerlof, 1970; Spence, 1973; Stiglitz, 1975). In our model, greater information asymmetry between the sender and the receiver reduces value. The sender can deliberately send a wrong signal, which reduces the value of the information for the receiver.

Persuasion and Information Disclosure

The sender can overwhelm the receiver by disclosing too much information. Although this information is more valuable than less information, it might be difficult to find the relevant information to effectively solve a problem. One way to possibly overcome this issue is by persuasion (see Figure 1, region B) (Rayo and Segal, 2010). Until now, this strand of research has only investigated situations where there is symmetric information between sender and receiver. Under certain conditions, a sender can persuade a receiver in a fashion that solely benefits the sender (Kamenica and Gentzkow, 2011). Interestingly, this work also shows that full information disclosure is optimal in some situations, whereas no disclosure is optimal in other situations. In the context of the IoT, interactions between machines, i.e., M2M, are likely symmetric, as machines cannot be dishonest per se. Interactions involving humans are likely

asymmetric. At the heart of persuasion lies the idea of selective information disclosure.

Legal Aspects of Information Disclosure

It is important to recognize that Blackwell's fineness theorem is only valid provided a set of assumptions are fulfilled. An obvious restriction is costs. Collecting data with a finer granularity is a costly exercise and, thus, must be subtracted as a cost from the value of such information. Note that we do not specify who ultimately benefits from the value of such information. The reason for this is that who shares in the value is context dependent. Often, this is the receiver, but it is also possible that the sender or a third-party will benefit from the disclosure of information. Similarly, privacy will indirectly affect the value of disclosed information, whereas liability will directly affect it (see Figure 1, region C). Both can be interpreted as a cost and, as such, will reduce the benefit of information disclosure. Privacy concerns are mitigated by the level of sensitivity of the information disclosed. The accidental release of less-sensitive information is unproblematic. However, the unintended disclosure of sensitive information can result in serious liability exposure.

Implications for the Future Shape of Information Systems

The greater number of human and machine interactions is expected to have profound implications for the design of future information systems. Traditionally, one question was whether the information technology departments should be organized in a more centralized or decentralized fashion. The interaction between humans and machines, and particularly the interaction between managers and machines, opens future possibilities. Is it still meaningful to design information systems to serve the management? Or should the future design be shaped in a way that it also better serves ever more AI machines? We believe that substantial technological advances will create a need for future information systems that serve both human managers and AI machines.

What role does information systems play at the machine level? Just as the information technology department supports the decision-making process of the manager, it is similarly expected to support AI machines. Consider a situation of a network of smart sensors. Each smart sensor, though tiny, can boast powerful processing for analyzing data and creating information. Based on the outcome of the analysis performed by the localized information system, the smart sensor can then decide what to do with the information. For example, the information can be sent to other machines, be it sensors or robots or, alternatively, humans. Why do we advocate such a localized information system? In practice, large sensor networks have frequently failed to fully meet the objectives as set out before deployment. For example, smoke detectors often trigger false alarms. A smart sensor system with localized information system can communicate effectively between devices and reach certain conclusions and decisions without requiring interaction with a human. Again, using above example, one reason for a false alarm could be a malfunctioning sensor. Naturally, a sensor network of "dumb" devices cannot self-heal. A smart sensor network could instead analyze the data and then solve the problem by ordering a replacement device. Although intelligent machines will be able to compete with human managers in many aspects, for the foreseeable future, certain areas will remain the domain of the manager. Most importantly, managers should continue to have an edge in asking good questions (Dewhurst and Willmott, 2014). In the following section, we discuss aspects of the third level of our theoretical framework of information disclosure within the future of information technology.

EMERGENCE OF LEGAL ISSUES IN SMART DEVICES

The IoT is an emerging complex system with the potential to produce many innovations but that also has unforeseen policy consequences. Politicians, academics, and business leaders around the world — particularly in Europe and the United States — are now debating the potential policy impacts, with most of the initial discussion focusing on three contentious and competing issues: privacy, security and liability.

Privacy Risks and the IoT

Privacy is already a public policy issue with the existing Internet, and much of the current IoT privacy debate looks at the possibility (or probability) that the sheer size and ubiquitous nature of the IoT will transmogrify the problems, heightening the issue by orders of magnitude (Chen, Chiang and Storey, 2012). The IoT offers the prospect that an enormous amount of personal data can be

collected and processed (Fleisch and Mattern, 2005). However, most of the data collected by the IoT will not be of a personal nature. Currently, most sensors operate in remote locations with little or no interaction with people. Furthermore, people often freely provide their personal information in exchange for perceived benefits or information and with the belief that their personal data are protected from unwanted viewing through privacy screen settings.

Two key issues at the core of the privacy debate include the following: 1) the desire of an individual to conceal or keep secret private information and 2) the use of private information after it is collected (Weber, 2009; Weber, 2010). As will be explained, this (the misuse — either accidental or intentional) is closely connected with liability issues.

When considering the desire to keep private data secret, a key consideration is the *context* in which data may be collected. For example, most people expect privacy in their homes, and there are special privacy expectations regarding information about our health, finances, and our families, especially children. Societal expectations are guided by judicial rulings, which are supposedly guided by societal expectations, which in turn are guided by judicial rulings, and so on (Harper, 2008; Rosen, 2001). In the United States, there are current laws protecting the privacy of health data (Health Insurance Portability and Accountability Act of 1996 or HIPAA), financial data (The Right to Financial Privacy Act of 1978), and children (Child Online Privacy Protection Act of 1998 or COPPA). However, there are some instances where people are unaware that they are being scanned, for example, through hidden surveillance equipment or by RFID tags attached to store purchases (Mayer, 2009).

There are also privacy concerns about the amount of collected data, its relevance, and where and how long it is stored. With the existing Internet, there are many instances where databases are hacked, identities are stolen, and personal data are sold to third parties and reused without consumer knowledge. Most privacy advocates believe that only the minimum relevant amount of data should be collected for legitimate purposes to serve a specific need (data proportionality) and that data should be erased after a reasonable amount of time (data minimization). Privacy advocates also believe that most data should be anonymized so that it cannot be tied directly to an individual (Pattison, 2013). There is special concern that if data are not anonymized, then they could potentially be used to track specific individuals while being linked to information in other databases and possibly used to predict future behavior. This could lead to social profiling (CDD, 2013), such as barring a person with a low credit score from entering a store; social sorting (Miller and Kearns, 2012), where different individuals or groups receive access to unequal opportunities; and changes in relative power between retailers and consumers. Despite these privacy aspirations, the sheer volume of data and the way it is stored make it unclear whether the data can ever truly be erased or made completely unidentifiable.

In addition to data minimization and anonymization, there are other proposed recommendations regarding privacy controls. This includes requiring consumer consent before data collection and having companies implement "privacy by design" (PbD), which would build privacy controls into IoT-enabled devices so that they can be shut off or disabled by consumers who do not want to be scanned. The suggestion has also been made that companies be subjected to data privacy audits to ensure that consumer data is being properly handled. There is also a general feeling that consumers have a right data transparency — knowledge of what personal information is collected and how it is used (Kingsley, 2013).

In response to these concerns, companies involved in the design and future production of IoT hardware and software are currently lobbying for the ability to self-regulate product privacy. The concern is that privacy regulation could stifle IoT innovation. They have organized cooperative industry efforts such as the Future Privacy Forum (FPF) and have proposed the implementation of a privacy seal program based upon a fundamental set of privacy principles. However, regulation of privacy is still a major concern in both Europe and the U. S. Under the concept of data sovereignty, information that is stored in digital format is subject to the laws of the country in which it is located.

The issue of privacy was further exacerbated during the summer 2013 with the release of National Security Agency (NSA) documents by Edward Snowden on PRISM, a clandestine mass electronic surveillance data mining operation begun by the NSA in 2007. The electronic surveillance, which included monitoring the phone, email, and other communications of both U.S. citizens and foreign nationals, highlights the complex policy relationship between the desire for individual privacy and the need for public security.

Security Risks and the IoT

Security is another serious IoT policy issue that transcends the individual to include small companies and corporations, municipalities, critical infrastructure, and national security threats. Such threats exist with the current Internet but are expected to be exacerbated by the IoT convergence of the physical and cyber worlds and the exponential increase in the number of objects potentially vulnerable to attack (Ning, Liu and Yang, 2013).

This problem, it is posited, stems from a disconnect related to security and privacy between electronic and mechanical engineers who design the machines or devices, on the one hand, and the communication engineers who connect and integrate those devices to the IoT, on the other hand. Figure 2 illustrates this diagrammatically.

This lack of communication is also often an issue between software and hardware engineers. This can be managed well, but it requires that rules of consistency be followed to ensure internal integrity of the processes. Windows XP is illustrative of this point. Microsoft is obsoleting XP, and upgrading the operating system software on an existing computer is usually not an option. It is necessary to purchase new hardware. Potentially, all devices belonging to the IoT will have the same issue. A smart vehicle, for example, in perfect mechanical condition will become unusable because it is an older model, and a software patch will not load.

Therefore, security must be engineered early in the development of Internet-connected devices; "bolt-on" security after the fact does not work. Consider our network-connected medical devices. Many of these have never undergone a serious security evaluation. Stemming from this is the issue of privacy. For a transit system to work, for example, traffic routers must track the starting location, route, and destination of every vehicle on the road. Alarming implications for privacy result if the data are not properly protected.

As with today's Internet, there are many ways to compromise IoT systems, components and services. First, as noted in the introduction, the IoT can be hacked. One journalist attending the 2013 Black Hat Conference forecast that IoT

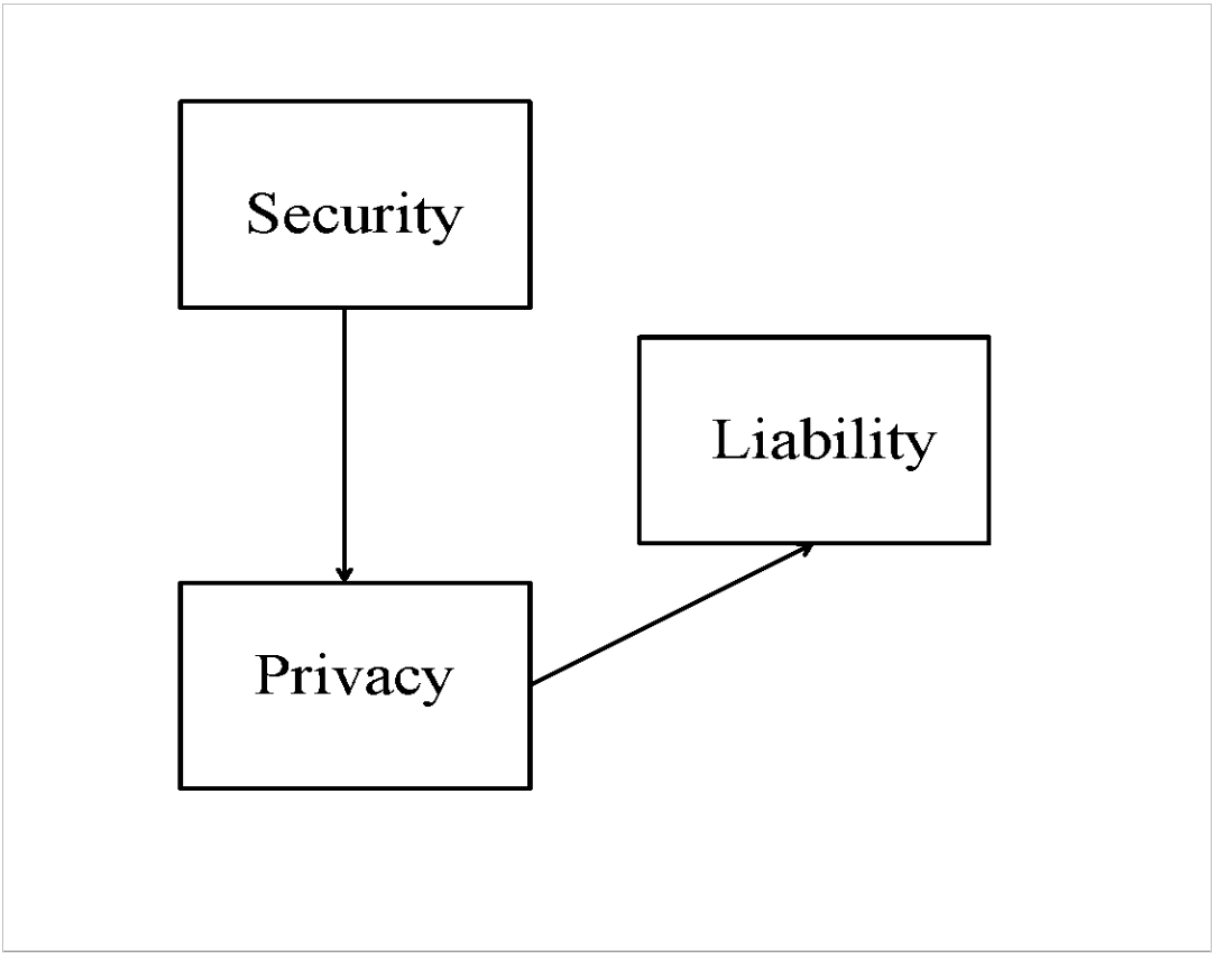

Figure 2: Interrelationship between Legal Issues in the IoT and MIS

and "thing hacking" would produce its own conference in the coming years (Lundquist, 2013). One revelation that has come to light is that vulnerable "things" on the Internet are very easy to find. There is a search engine called "Shodan" (www.shodanhq.com) that can be used to expose over 500 million things that are "carelessly" connected to the web, including (as quoted on their homepage) "webcams, routers, power plants, iPhones, wind turbines, refrigerators, and VoIP phones." Once hacked, data can be compromised, or software can be infected with malware or viruses. Furthermore, hacking can give an intruder access to other components of the system, creating local service disruptions or system-wide outages.

In April 2008, the National Intelligence Council (NIC), part of the Office of the Director of National Intelligence, released a report entitled "Disruptive Civil Technologies: Six Technologies with Potential Impacts on US Interests out to 2025." The report, prepared by SRI, stated that "Popular demand combined with technology advances could drive widespread diffusion of an IoT that could, similar to the present Internet, contribute invaluably to our economy." However, it then goes on to note that "to the extent that everyday objects become information security risks, the IoT could distribute those risks far more widely than the Internet has to date" (SRI Consulting, 2008).

Therefore, the more sensitive the information transmitted through the IoT, the more problematic it becomes. To address this problem, more critical processing can be done at the AI level to only send the relevant information that can be in a desensitized format. The key objective is that the right message be sent to the receiver while simultaneously utilizing the function of AI machines to undertake a large part of the process.

There are many ways to protect IoT data security. Like some privacy situations, not all data and IoT systems will be sensitive, requiring elaborate security protection. For data and systems that do require security, technical solutions are being developed to protect the confidentiality, integrity and access to sensitive systems and data. Additionally, like privacy, it is posited that there is a need for global security standards and government regulation. Some groups and government officials (including in the United States, the United Kingdom and Germany) are now, in fact, advocating for security-by-design (SbD), where manufacturers are required to build prescribed security features into their IoT devices. Such prescribed security requirements would, no doubt, be very costly to implement. The IoT is still in its infancy, with many innovative applications still on the virtual drawing board. Thus, any attempts at regulation today could have repercussions concerning the way IoT devices, particularly AI machines, and applications evolve in the future.

Granularity, Security, Privacy and Liability

As outlined in Figure 2, understanding this nexus between Privacy and Security and Privacy and Liability provides an added understanding of the *cost* and respective *value* of information disclosed between users (sender and direct receivers) and third parties (indirect receivers). As mentioned above, **collecting data with a finer granularity is a costly exercise and needs to be subtracted as a cost from the value of such information. The beneficiary of the value of such information is dependent on the context or reason it is obtained.**

Existing scholarship has mostly assumed away the cost of generating more granular information — the cost of fineness of information. For example, if we have greater segmentation of data and information and face the same decision, then this information is worth at least as much as if we had less-detailed information. However, such a statement ignores costs. If we want finer information, we must accept greater costs. These costs may be physical, for example, the need for a greater sensor network, but they may also be legal. Along with this comes other issues regarding privacy of individuals, organizations, and considerations about the implications of liability, especially regarding who (i.e., which entity would be responsible), what, and how.

The issue of privacy will indirectly affect the value of disclosed information, whereas liability will directly affect this value. While both can be interpreted as a cost and, as such, will reduce the benefit of information disclosure, privacy concerns are offset by the level of sensitivity of the information disclosed. Thus, while the accidental release of less-sensitive information is unproblematic, the unintended disclosure of sensitive information can result in serious liability exposure. These observations and relationships are represented below.

It is posited that the assessment of "value" to a *user* (who is the provider of the information) is directly connected with liability issues. An assessment of "high" value to a user would mean there are higher liability issues linked to the information and, therefore, potentially greater costs

associated with security. Meanwhile, an assessment of the value to a third party would stem directly from the benefit derived from information disclosure and, therefore, information availability. If we have more information (or less information asymmetry), then there is greater value for the receiving party. However, this is a simplified version of the argument because it does not account for costs — particularly indirect costs through unforeseen adverse legal outcomes.

What, then, is the nexus between Granularity and Privacy to Liability? The IoT is not a question of *if,* but of *when*. It is likely to result in a fundamental change of the function and role of information systems in that the future will serve not only humans but also machines. This is no doubt a fundamental matter that informs decision-making in a business context. Presently, there exists a multitude of technologies, yet the full extent of capabilities in a networking sense has not yet been utilized, which leads to process inefficiency. Consider the replacement of a defective smoke detector in an office, which is delayed by a human manager due to time constraints. Machines can assume an important role. A smart device could instead be utilized to determine that a device next to it does not work properly and to order a replacement device. The new information system expands from human to machine by placing it close to the machine such that the machine, in part, becomes a manager. This precipitates consideration about the liability of a non-human manager (i.e., an AI machine), as discussed below.

Liability and the IoT

Liability issues are related to physical items and to the underlying data (or information). Three questions must be asked: First, who owns the data, and can ownership be assumed by something other than a "human" entity? The question concerns product liability in the context of the IoT and whether the law of torts is sufficient to address future issues in the new information systems. The third question concerns the degree to which the law of contracts can mitigate the liability of operators or receivers of data (or information), whether the interaction (of sender and receiver) be human to machine (H2M), machine to machine (M2M), AI machine to AI machine ($M_{AI}2M_{AI}$), or machine to human (M2H). As previously mentioned, the new information system requires the use of AI machines. Problematic areas from a privacy and liability perspective are essentially any connections that involve M_{AI}.

Traditionally, the roles of managers and information management have been assumed by two separate entities. However, under the new information systems, although it is not necessary, it is possible to merge the role of manager and information technology at the machine level. The reason is that we expect the machine itself to be increasingly more involved in the actual decision-making process by using ever more sophisticated AI algorithms. As such, it also makes it possible to place these "mini" information systems directly on the AI machine. Naturally, at this point, an understanding of managerial and information technology roles is not very clear, and we believe this is going to be a key area of research in the future. One of the things we see as a potential benefit is that the merging of roles could potentially help contribute to privacy preserving analytics because it will no longer make it necessary to disclose highly personal or private data (or information) to unintended receivers. One can also see that data at the local level is stored in an encrypted fashion, which would also help mitigate privacy and security concerns.

Data Ownership: The issue of data ownership is of central importance in the Io T. Information ownership, as opposed to data ownership, has been explored in the context of cloud computing and cloud storage (Gasser 2014). Specifically, the liability for data misuse is traced back to a legal entity (i.e., human or corporate entity). However, because data is increasingly created and processed by machines, the issue of liability of data — including its misuse *by* a device and *because* of a device — becomes somewhat murky.

Vehicle self-navigation systems are a case in point. For self-navigation to work, cars need to be connected in various ways so that safe navigation of vehicles on streets is achieved. Such connected cars are fitted with complex self-navigation systems. Such a system boasts several sensors that generate data and that can send basic data about the performance of a car and potential defects to the original equipment manufacturers (OEMs) before they materialize (White, 2013; NHTSA, 2013). However, this raises the question of whether the car owner can always preclude third parties such as OEMs, car shops and others from accessing the data generated by those sensors, as the data belongs to the owner of connected cars once the sale of that vehicle has been completed.

An alternative view may be that OEMs can find arguments for having obtained database rights in the data because of the investment they have made or that they have retained ownership in data-generating devices in the car that they might have specifically excluded from the sale at the time. Further restrictions certainly arise concerning personal data. OEMs are keen to obtain such data, but a lack of clarity on data ownership creates legal risk for the companies, which may stifle innovation. There are also a range of issues around liability that arise in a connected car setting should data not flow as intended across a network (or within the vehicle) or should security safeguards against external tampering or even cyber-attacks prove insufficient.

The Physical Device and Negligence: Product manufacturers have a duty to exercise a reasonable degree of care in designing their products so that those products will be safe when used in reasonably foreseeable ways. As a (very unlikely!) thought experiment, consider a manufacturer of fully automated (i.e., specifically designed so no driver intervention is needed) braking systems that, against all common sense, conducts testing using only vehicles driven on dry road surfaces. If the braking systems then prove unable to reliably avoid frontal collisions on wet roads, a person injured in a frontal collision on a rainy day could file a negligence claim. He or she could argue that his or her injuries were directly attributable to the manufacturer's negligent failure to anticipate driving in wet conditions as a reasonably foreseeable use of a car equipped with the fully automated braking system.

The Physical Device and Strict Liability: Even when a manufacturer exercises all possible care in attempting to build safe products, sometimes a product will nonetheless be shipped containing an unsafe defect — for example, an "Eye System" such as Google Lens causing cataracts in users. If that defect then causes injury to a user of the product, the manufacturer could be "strictly" liable for the resulting damages (Restatement (Second) of Torts). The term "strict" is used because it removes the issue of manufacturer negligence from consideration; instead, it is based on consumer expectations that products should not be unreasonably dangerous (Dobbs and Keeton, 1984; Greenman v. Yuba Power, 1963). Historically, and to a significant extent today, strict liability has been invoked with respect to manufacturing defects, design defects, and "failure to warn" (Restatement (Second) of Torts).

Under the Second Restatement — and, thus, under an enormous body of products liability case laws — a manufacturer can be liable for the sale of a product containing an "unreasonably dangerous" defect even if it has "exercised

all possible care in the preparation and sale" of the product (Restatement (Second) of Torts). In addition, the liability can apply even if the user of the product "has not bought the product from or entered into any contractual relation with the seller." As a result, any entity in the product distribution chain upstream from the user can be held strictly liable, and the user does not need to have purchased the product at all. If a manufacturing defect injures a passenger riding in a car owned by a friend, the injured passenger could file a strict liability claim against the manufacturer (or other entities in the distribution chain).

In 1998, the American Law Institute published the "Restatement (Third) of Torts: Product Liability." The Third Restatement specifically addresses manufacturing defects, design defects, and failure to warn, but it notably ties liability for design defects and failure to warn to "foreseeable risks." Under this framework, which will likely be used by an increasing number of courts in the future, the failure of a manufacturer to identify and mitigate a dangerous "foreseeable" risk is more akin to negligence than to strict liability. While the landscape is somewhat in transition with respect to the specific theories of liability that can be invoked to pursue claims regarding manufacturing defects, design defects, and failure to warn, all three remain central to products liability law.

Manufacturing and Design defects: Consider a manufacturer of fully autonomous and self-navigating vehicles (such as an unmanned aerial vehicle or "UAVs") that usually ships its vehicles with well-tested, market-ready automatic braking software. However, suppose that in one instance it accidentally ships one vehicle with a prototype version of an AI algorithm containing a flaw does not present in the market-ready version. If the vehicle with the faulty device becomes involved in an accident attributable to the flaw, a person injured in the accident could file a claim for damages arising from this

manufacturing defect. A manufacturer can be found strictly liable for dangerous manufacturing defects, even if it has exercised "all possible care" in preparing the product. It could be argued that if liability issues affecting M2M (or $M_{AI}2M_{AI}$) or M2H (or $M_{AI}2H$) data exchange as a result of such a manufacturing defect, the manufacturer would be held liable. This would avert consideration of attributing legal entity status to entities such as machines (nor AI machines) otherwise not presently classified as "legal entities" for the purposes of legal liability.

More importantly, the built-in sensor system and AI equipment assists the vehicle in performing crucial driving tasks such as keeping the vehicle on the road, in the right lane, at the appropriate speed, and at a safe distance from other vehicles and road obstacles. There are several considerations to account for because a human operator may seldom drive a vehicle in the future. When then, should the human passenger (the owner of the vehicle) overrule an incorrect decision by an AI machine?

For example, sometimes a device may contain a design defect that causes harm. In the context of Vehicle Self-Navigation Systems, liability complaints alleging design defects are likely to arise in connection with the shared responsibilities between the vehicle and the human driver. Suppose that a manufacturer markets a system that it claims has a specific level of automation (e.g., NHTSA level two automation, which "involves automation of at least two primary control functions designed to work in unison to relieve the driver of control of those functions"). The NHTSA definition of automation level two also states that the "driver is still responsible for monitoring the roadway and safe operation and is expected to be available for control at all times and on short notice" (NHTSA, 2013). The meaning of "short notice" is, however, unclear.

Consider an accident that occurs because a human driver does not take over control of the autonomous vehicle quickly enough. In a products liability lawsuit, an injured party would likely argue that the system had a design defect because it should have been designed to provide the driver with more advanced warning. The manufacturer of the system might counter by arguing 1) that the system *did* provide sufficient advanced warning and 2) that providing even more warning would necessitate adding very costly new sensors to the system that would only increase the warning time so marginally as to make no practical difference in the time available to a driver (or user) to react. Due to the United States Constitution guarantee that each American citizen has certain civil rights of personal liberty, the manufacturer or operator cannot wholly mitigate their liability under Torts Law through private contractual arrangement. Liability for an alleged design defect is often determined using a risk-utility test, the standards of which vary in different states. Risk-utility tests generally examine whether the risks posed by an alleged design defect could have been avoided or reduced using an alternative solution that would not have impaired the utility of the product or unnecessarily increased its cost.

Privacy: The issue of liability for breach of privacy has a direct nexus to information disclosure and data granularity. Smart machines — Eye Systems, for example — process data and come up with conclusions. Specifically, it can collect data about your health condition. A breach of privacy may ensue where a mistake is encountered in the artificial intelligence process. Because of this, the information that is now sent from this machine (i.e., smart device) to others (or to a human) ($M_{AI}2M_{AI}$ or $M_{AI}2H$) results in some sort of damage. Consider, for example, if this information somehow ends up with an insurance company that is very private to you and, as a result, refuses to insure you or increase your premium because it is a pre-existing medical condition. This damage or cost could be to society at large (because incorrect information is provided) or to an individual entity (because specific data or sensitive information concerning that person are leaked). Who, then, is liable for this harm? As discussed, the issue of liability is met with two hurdles. First, only a "legal entity" has standing to sue or be sued (County of Riverside v. McLaughlin). A legal entity, at least under present law, does not extend to a machine or to artificial intelligence. Second, liability may be directly related to the way in which data are transferred via the Internet, or the data are affected *because* of the device.

Similarly, information leakage within the IoT raises issues concerning ISP liability for third party content, which has previously been explored in scholarship (Schruers, 2002). However, what happens when a subscriber to an ISP behaves badly and causes an injury to an unsuspecting third party — say, by copying someone's data without authorization or making a libelous statement? Is the ISP responsible for the behavior or actions of its subscribers? Can the victim

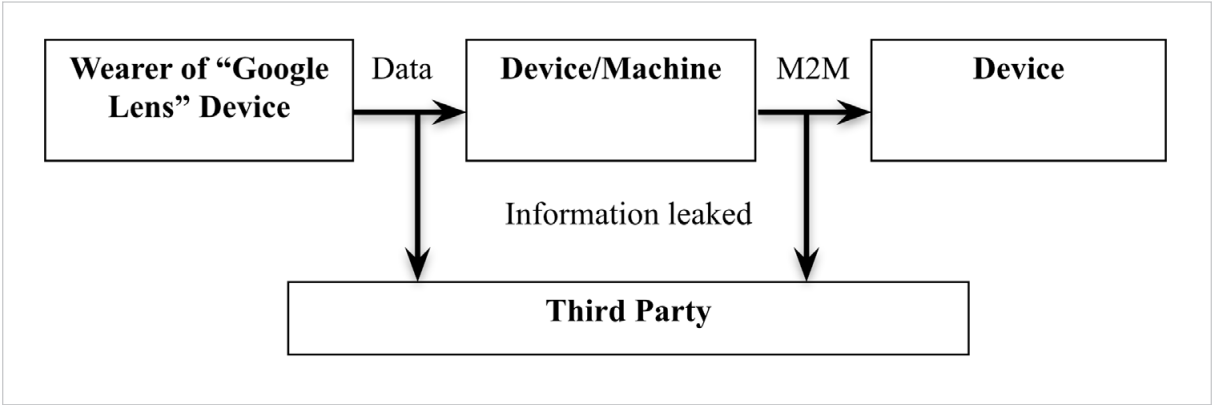

Figure 3: Eye System, Defamation and Privacy

of an online injury argue that even though the ISP is not the direct cause it can be sued because it knew of the activity, encouraged it, profited from it, or had control over it?

Such an issue may arise where information is mistakenly "leaked" between an M2M or $M_{AI-2M_{AI}}$ exchange in a People Flow System or an Eye System. For example, incorrect information concerning a person's health obtained from a device (as described above) could be mistakenly leaked and published on the Internet (see Figure 3), resulting in damage to their reputation. Such a person (the "wearer" and related affected parties) may bring an action for defamation of character, also known as libel, if the publication of an untrue statement that causes injury to the reputation of a person or business occurs. Notably, the Google Lens is licensed by the pharmaceutical giant Novartis. This raises multiple issues, including the following: Who is liable — the licensor or the licensee? What is the applicable jurisdiction to bring an action for breach of privacy or negligence? And does such a smart device require approval by health authorities?

Determination of liability can be relatively straightforward and is generally specified in the contractual arrangement between the licensor and the licensee. The applicable jurisdiction is similarly clear-cut, other than where the jurisdiction in question is in an online environment. Such an issue may be increasingly prevalent in the context of the Io T. Presently, however, there is no statutory reference in any jurisdiction around the world that explicitly outlines how online jurisdiction is determined. Rather, this may be outlined in case law. The leading case in the United States is Zippo Manufacturing Co. v Zippo Dot Com, which states that "the likelihood that personal jurisdiction can be constitutionally exercised is directly proportionate to the nature and quality of the commercial activity that an entity conducts over the internet."

Under present law, ISP accountability is similarly challenging. Section 230 of the Communications Decency Act (CDA) states that no ISP "shall be treated as the publisher or speaker of any information provided by another information content provider." In other words, the CDA shields ISPs from liability for statements or content from its users. This is true even where the ISP paid the writer for use of the statements (Zeran v. America Online Inc.; Blumenthal v. Drudge; Jane Doe v. America Online). An action for unauthorized copying (i.e., copyright infringement) may also be brought under the Digital Millennium Copyright Act (DCMA). A discussion of this is beyond the scope of the present paper.

The issue of liability and privacy could, however, be addressed at the device level. With respect to the former, a device could have built-in capabilities to connect to the licensor or the licensee. In such a case, a determination of liability and governing jurisdiction may be easily identified. The latter could be addressed using selective information disclosure. This would overcome some of the privacy problems because some of the privacy issues would be kept away from the human domain. At one end of the spectrum, having access to everyone's data raises the possibility of jeopardizing everyone's privacy. The other extreme is that humans are guarded from accessing any information at all. If a buffer is built with machines, these machines try to perform intelligent task with available data and send humans information that is relevant as opposed to superfluous. Thus, the feasibility of this approach has been demonstrated by the People Flow System, in which a smart sensor monitors the movement of individuals but only

discloses this information to the receiver as anonymized dots (or circles). The advantage of this approach is that the AI machine can still know whether the circle is the same person, whereas the receiver will be shielded from this private information.

Granularity, Privacy and Regulation

Closely tied to privacy is information disclosure and granularity. For example, Watson et al. (2010) define "granularity" as "the level and frequency of information collection." Interestingly, in one of their examples, they observe that extra data that were collected added little value. As identified in Figure 1, granularity has a direct impact on information disclosure, the sensitivity of which informs the "value" of that information to both the sender and the receiver. An example is when a sender volunteers information by way of release in hopes of gaining a benefit in exchange or being compensated for the information release. This becomes increasingly valuable the fewer people there are who receive this information. This is where the sensitivity comes in. If information generated is truly valuable, then the property value holds monopolistic property rights. When a person keeps information to themselves, it is a monopolistic market. However, if information is good enough, then the sensitivity of the information is at issue. In our current market, there is an enormous amount of information disclosure, possibly because of ignorance or compensation to a person (e.g., providing something for free), but which hides that there is some benefit to the third party as a result of that information. The aim of information technology should be to bring things back in order so that TPs benefit less and the information is guarded more closely. We can collect data with great granularity, store them locally (even at the machine level) and process it there. By doing so, we can reduce privacy issues and concerns, possibly making regulation easier.

When there is a mistake *with* or *in* the Artificial Intelligence process and harm is suffered, an assessment of liability depends on the type of harm suffered, the classification of the parties involved, and an assessment of the chain of events (i.e., causation). Consider a situation where an AI machine makes a decision and for some reason it makes a mistake in the DM process. Because the machine cannot be held responsible for its own actions, who is responsible for the harm that is caused?

One possible solution to minimizing the potential negative effects of using a device could rest in the new information system and the shape that it takes. Perhaps an open data approach could be adopted for big data and the IoT, which could help alleviate some legal issues that could arise around access and proprietary rights to data. It could be argued that moving toward an open data approach for data generated by IoT technology could avoid issues around unfair competition. The People Flow case study is illustrative of this. The traditional approach has centered around the use of CCTV, which streams much data, but where it is difficult to create and find relevant information. Often, a person needs to watch hours of streams to identify unusual behavior. In contrast, a smart sensor would make decisions about how to monitor. For example, a smart sensor can detect unusual patterns and then use CCTV to collect data with greater granularity. In addition, privacy can be better maintained because the smart sensor can reorganize

the collected data. The machine, for instance, can identify the person but then only inform the receiver that *a* person behaves in a suspicious fashion.

We observe that making data available to those who intend to use it in the interests of fostering new ideas and services would help avoid monopolies emerging around access rights to data. With data likely to become an increasingly important asset, having monopoly rights to data and restricting rivals' access to that data under certain circumstances could be interpreted as a breach of competition rules.

From a broader perspective, do we have a decentralized MIS (many little MIS interacting), or do we give more intelligent machines a greater role or responsibility than less important machines? An analogy can be drawn for a manager — for example, a line or division manager — who will ultimately be responsible. The "new" MIS will no doubt introduce an increasing number of situations where a "machine" should be liable — particularly if it operates in place of a manager. Under the present legal system, however, an assessment of liability may otherwise shift to an owner of a device — a legal entity. Such considerations are very complex, and we are providing an initial attempt to organize these factors in a meaningful fashion.

For now, there appears to be an urgent need for implementing an updated data protection law framework in the United States as well as introducing new rules on network and information security. Businesses should receive sufficient guidance on anonymizing and pseudonymizing data sets that include personal information as well as minimizing the amount of data they collect following the adoption of new data protection laws that would complement technical solutions that are privacy-enhancing by design. Guidelines outlining how security risks associated with the increasing volume of data being created can be managed and reduced would be complementary to this. At the same time, incentives to share datasets between partners and mechanisms to facilitate knowledge and technology transfers should also be developed. We predict that one area on the horizon spurring from this could also be how cloud computing solutions can be best configured and used for data analytics and advanced infrastructures and services. We envisage that such measures would promote the industry-led development of more open standards to encourage data to be exchanged within the new information system.

Adapting the Law to Fit the New Information Technology

Products liability law has proven to be remarkably adaptive to new technologies. The same will hold true for smart devices within the new information system. Products liability has been one of the most dynamic fields of law since the middle of the 20th century. In part, this is because the new technologies that emerged over this period have led courts to consider a continuing series of initially novel products liability questions. Overall, the courts have generally proven quite capable of addressing these questions and in so doing have been the primary drivers of a positive feedback cycle involving case law, the American Law Institute's Second (in 1965) and Third (in 1998) Restatements, revisions to the Uniform Commercial Code (UCC), and changes to state statutory law. Through this process, products liability law has evolved to its current state. Given this strong record of adaptation to new technologies, there is no reason to expect that the legal system will be unable to address the products liability issues that arise with respect to smart devices that operate within the Io T. As the IoT matures in the coming years, it will be important to establish a nationally consistent set of regulations. Those standards, once they are established, would indirectly impact liability. The process of setting standards at the federal level would provide a set of metrics that state courts would likely choose to adopt in liability cases.

SMART DEVICE CONNECTIVITY

The IoT is not a question of *if,* but of *when*. It is likely to result in a fundamental change of the function and role of MIS. As discussed, future information systems will serve not only humans but also machines. This, no doubt, is the fundamental departure that will affect decision-making in the business context. Under current management practices, the roles of managers and MIS are separated. This, by design, makes privacy-preserving analytics challenging.

In the future, however, through the use of AI, machines and devices will be able to do far more incredible things than they can currently do. Therefore, our theoretical model (which is designed under a prediction perspective) can be utilized to provide specific answers using case study examples as to what can be done. We predict that this will not only affect the IoT itself

but that it can also be implemented in areas outside IoT where it is possible to merge AI and information systems. One of the potential benefits we see is that the merging of roles could potentially help contribute to privacy-preserving analytics because it will no longer be necessary to disclose highly personal or private data (or information) to unintended receivers.

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REFERENCES

Akerlof, G. A. (1970). The market for 'lemons': Quality uncertainty and the market mechanism. *Quarterly Journal of Economics* (84:3), pp. 488–500.

Ashton, K. (2009). That 'Internet of Things' Thing. *RFID Journal*. http://www.rfidjournal.com/articles/view?4986

Bakos, J. Y. (1997). Reducing Buyer Search Costs: Implications for Dlectronic Marketplaces. *Management Science* (43:12), pp. 1676–1692.

Bakos, Y., Brynjolfsson, E., and Lichtman, D. (1999). Shared Information Goods. *Journal of Law and Economics* (42), pp. 117–155.

Benbasat, I., and Zmud R. W. (2003). The Identity Crisis Within the IS Discipline: Defining and Communicating the Discipline's Core Properties. *MIS Quarterly* (27:2), pp. 183–194.

Blumenthal v. Drudge, 992 F. Supp. 44 (D.D.C. 1998).

Brown, J. R., and Goolsbee, A. (2002). Does the Internet Make Markets More Competitive? Evidence from the Life Insurance Industry. *Journal of Political Economy* (110:3), pp. 481–507.

Chen, H., Chiang, R., and Storey, V. (2012). Business Intelligence and Analytics: From Big Data to Big Impact. *MIS Quarterly*, (36: 4), pp. 1165–1188.

County of Riverside v. McLaughlin, 500 U.S. 44 (1991).

Cowan, J. (2012). The $$ Cost of M2M Hype and False Hopes. http://www.m2mnow.biz/2012/12/14/9173-the-cost-of-m2m-hype-and-false-hopes/

Dewhurst, M., Willmott, P. (2014). Manager and Machine: The New Leadership Equation. *McKinsey Quarterly*, Issue 3, pp. 76–83.

Dobbs, D., and Keeton, R. (1984). Prosser and Keeton on the Law of Torts. 5th ed. Minneapolis, MN: West Group.

EU Commission Task Force for Smart Grids, Expert Group 1 (December 2010). Functionalities of Smart Grids and Smart Meters. http://ec.europa.eu/energy/gas_electricity/smartgrids/doc/expert_group1.pdf

Fleisch, E., and Mattern, F. (2005). Das Internet der Dinge. Berlin, Heidelberg: Springer.

Gartner Press Release. (2013). Gartner Says Personal Worlds and the Internet of Everything are Colliding to Create New Markets. http://www.gartner.com/newsroom/id/2621015

Gasser, U. (2014). Cloud Innovation and the Law: Issues, Approaches, and Interplay. *Berkman Center Research Publication* No. 2014–7.

Geyer, R., and Rihani, S. (2010). Complexity and Public Policy: A New Approach. New York, NY: Routledge.

Golling, M., and Stelte, B. (2011). Requirements for a Future EWS — Cyber Defence in the Internet of the Future. 3rd International Conference on Cyber Conflict Proceedings 7–10, Tallin, Estonia, pp. 135–150.

Greenman v. Yuba Power Products, Inc., 59 Cal. 2d 57 (Cal. 1963).

Gregor, S. (2006). The nature of theory in information systems. *MIS Quarterly* (30:3), pp. 611–642.

Gregor, S., and Jones D. (2007). The Anatomy of a Design Theory. *The Journal of the Association for Information Systems*, (8:5), pp. 312–335.

Gubbi, J., Buyya, R., Marusic, S., Palaniswami, M. (2013). Internet of Things (IoT): A vision, architectural elements, and future directions. *Future Generation Computer Systems* 29(7), pp. 1645–1660.

Harper, J. (2008). Reforming Fourth Amendment Privacy Doctrines. *American University Law Review* (57:5), pp. 1381–1403.

Hosanagar, K., Chuang, J., Krishnan, R., and Smith, M. D. (2008). Service Adoption and Pricing of Content Delivery Network (CDN) Services. *Management Science* (54:9), pp. 1579–1593.

Jane Doe v. America Online, Inc., 718 So.2d 385 (1998)

Kamenica, E., and Gentzkow, M. (2011). Bayesian Persuasion. *American Economic Review* (101:6), pp. 2590–2615.

Kendall J. E., and Kendall, K. E. (1993). Metaphors and Methodologies: Living Beyond the Systems Machine. *MIS Quarterly* (17:2), pp. 149–151.

Kingsley, T. (2013). AT&T comments to the Federal Trade Commission on the Privacy and Security Implications of the Internet of Things; FTC Project No. P135405.

http://ftc.gov/os/comments/internetthingscomments/00004–86142.pdf
Lee, A. S. (2001). Editorial. *MIS Quarterly* (25:1), pp. iii-vii.
Lewin, R. (2000). Complexity, "Life at the Edge of Chaos" 2nd ed. Chicago, IL: University of Chicago Press, pp. 130–132.
Lier, B. (2013). Luhmann Meets Weick: Information Interoperability and Situational Awareness. E: CO (15:1), pp. 71–95.
Lundquist, E. (2013). Black Hat 2013: Five Security Trends That Will Draw Most Attention. www.eweek.com/security/black-hat-2013-five-security-trends-that-will-draw-most-attention/
Marschak, J., and Radner, R. (1972). Economic Theory of Teams. New Haven and London: Yale University Press.
Mayer, C. (2009). Security and Privacy Challenges in the Internet of Things. published in Workshops der Wissenschaftlichen Konferenz Kommunikation in Verteilten Systemen 2009 (WowKiVS 2009) Proc. WowKiVS 2009 Volume 17.
Miller. G., and Kearns, M. (2012). Nanotechnology, Ubiquitous Computing and The Internet of Things: Challenges to Rights to Privacy and Data Protection. Draft Report to the Council of Europe.
National Highway Traffic Safety Administration (2013). Preliminary Statement of Policy Concerning Automated Vehicles. http://www.nhtsa.gov/staticfiles/rulemaking/pdf/Automated_Vehicles_Policy.pdf
Ning, H, Liu, H., and Yang, L. (2013). Cyberentity Security in the Internet of Things. http://www.cybermatics.org/lab/paper_pdf/2013/Cyberentity%20security%20in%20the%20internet%20of%20things.pdf
Orlikowski, W. J., and Iacono, C. S. (2001). Research Commentary: Desperately Seeking the "IT" in IT research — A Call to Theorizing the IT Artifact. *Information Systems Research* (12:2), pp. 121–134.
Oxford Dictionaries. (2013). Internet of things. at: http://www.oxforddictionaries.com/us/definition/american_english/Internet-of-things
Pattison, S. (2013). ARM Holdings PLC comments to the Federal Trade Commission on the Privacy and Security Implications of the Internet of Things; FTC Project No. P135405. http://ftc.gov/os/comments/internetthingscomments/00011–86154.pdf
Rayo, L., and Segal, I. (2010). Optimal Information Disclosure. *Journal of Political Economy* (118:5), pp. 949–987.
Restatement (Second) of Torts § 402A (1965).
Restatement (Third) of Torts § 7 (1998).
Rooney, B. (2013). Internet of Things Poses Big Questions. Wall Street Journal Online. http://online.wsj.com/article/SB10001424127887323899704578583372300514886.html
Rosen, J. (2001). The Unwanted Gaze: The Destruction of Privacy in America. Vintage, p. 60.
Sankaranarayanan, R., and Sundararajan, A. (2010). Electronic Markets, Search Costs, and Firm Boundaries. *Information Systems Research (21:1), pp. 154–169.*
Santucci, G. (2010). 1.1 The Internet of Things: Between the Revolution of the Internet and the Metamorphosis of Objects. https://www.google.com/#q=Vision%20and%20Challenges%20for%20Realising%20the%20Internet%20of%20Things&safe=active
Schruers, M. (2002). The History and Economics of ISP Liability for Third Party Content. *Virginia Law Review* (88:1) 205.
Spence, M. (1973). Job Market Sigaling. *Quarterly Journal of Economics* (87:3), 355–374.
SRI Consulting. (2008). Disruptive Civil Technologies Six Technologies with Potential Impacts on US Interests out to 2025. http://fas.org/irp/nic/disruptive.pdf
Stiglitz, J. E. (1975). The Theory of 'Screening', Education, and the Distribution of Income. *American Economic Review* (65:3), pp. 283–300.
Tan, L., and Wang, N. (2010). Future Internet: The Internet of Things. 3rd International Conference on Advanced Computer Theory and Engineering (ICACTE).
The Economist Intelligence Unit. (2013). The Internet of Things Business Index: A Quiet Revolution Gathers Pace. http://www.arm.com/files/pdf/EIU_Internet_Business_Index_WEB.PDF
Watson, R. T., Boudreau M. C. and Chen A. J. (2010). Information Systems and Environmentally Sustainable Development: Energy Informatics and New Directions for the IS Community. *MIS Quarterly* (34:1)
Weber, R. (2009). Internet of Things — Need for a New Legal Environment. *Computer Law & Security Review* (25), pp. 522–527.
Weber, R. (2010). Internet of Things — New Security and Privacy Challenges. *Computer Law & Security Review* (26), pp. 23–30.
White, C. (2013). Car Tech Outlook: Self-Driving Cars Are Just around the Corner. *Mashable*. http://mashable.com/2013/06/23/self-driving-cars-3
Zeran v. America Online, Inc., 129 F.3d 327 (4th Cir. 1997).
Zippo Manufacturing Co. v. Zippo Dot Com, Inc., 952 F.Supp. 1119, 1124 (W. D. Pa. 1997).

THE POWER
OF A STORY

DWIGHT WILSON

EUROPEAN ACADEMY OF SCIENCES OF UKRAINE

- *Email: dwtracker@gmail.com*

Dwight Wilson is a Corresponding Member of EUASU. He has spent over a decade working in the private security industry protecting high profile clients and working in high risk areas. He currently works for Valor Force as a security professional. He is an author of two books on human and wildlife tracking, *Following Tracks Vol 1 and 2*, and has contracted with several government agencies as a professional tracker and instructor. Dwight is a Guro of Filipino Martial Arts with Rister International Martial Arts for more than 20 years experience.

ABSTRACT

What role do stories play in culture? How do stories shape collective identity, values, and behavior? Who are the storytellers, and through which media do narratives circulate and acquire power? This article examines storytelling as a foundational mechanism of cultural formation, communication, and influence. Drawing on historical examples, media theory, and reflective observations, the study explores how stories function across time — from early oral traditions to contemporary mass and digital media — and how they are used in religion, politics, propaganda, and psychological operations. The article argues that stories are not merely cultural artifacts but active forces that shape perception, social cohesion, and conflict.

Keywords

stories, storytelling, media, politician, culture, communication

INTRODUCTION

Culture is commonly defined as the beliefs, customs, and practices of a social group, place, or time (Merriam-Webster, n.d.). From an anthropological perspective, culture encompasses "the combined pattern of human knowledge, belief, and behavior that depends on the transmission of knowledge to succeeding generations" (Merriam-Webster, n.d.). Culture may be shaped by geography, language, belief systems, social practices, and religion. Culture is something most people never give much thought to unless they travel outside of the area of their culture.

Subcultures are much smaller groups of people within a larger culture and usually very specific. An example of this would be where I currently live in the United States. The state of Texas has a rich Tex Mex culture. You can see it represented in the people, architecture, celebrations, music, art, dance, customs, food and even the language. Traveling from the east to the west, the piney woods, to the plains, Trans Pecos desert, or mountains, and the south to the north, the gulf coast, swamps to the hill country, you will experience many variations of Texas culture.

Among the many elements that shape culture, communication plays a central role. I have always enjoyed communication, including languages, stories and storytelling. In some cases, misunderstanding between nations arises due to miscommunication and cultural differences. In my experiences with the European Academy of Sciences of Ukraine I have had the pleasure to work with Interpreters which have opened my understanding of different cultures.

As a young soldier, I was not only indoctrinated into a military culture, but I also had the opportunity to live for several years in what was then West Germany and experience a variety of cultures. A skilled interpreter must be able not only to convey the meaning of spoken words, but

also to understand cultural nuances and body language.

METHODS

This study employs a qualitative, interpretive approach combining historical analysis, media studies, and reflective autoethnographic observation. Primary sources include historical records of storytelling practices, media theory literature, psychological research on persuasion and propaganda, and documented examples from religion, politics, and military psychological operations. Secondary sources include scholarly articles, encyclopedic references, and media studies analyses.

The methodological framework is exploratory rather than empirical, aiming to synthesize interdisciplinary perspectives on storytelling as a cultural mechanism. Reflective observations drawn from lived experience are used to illustrate broader theoretical points, consistent with qualitative cultural analysis.

RESULTS

History of Storytelling

A brief history of storytelling is, in essence, a history of humanity on Earth. Long before the development of written languages — and even before fully articulated speech — early humans communicated through gestures and movements as they explored their environment. Over time, grunts and vocalizations evolved into the first rudimentary languages. To this day, some of the oldest known languages, particularly in parts of Africa, incorporate clicks and other distinctive sounds (Traill, n.d.).

In 2002, I had the opportunity to attend a screening of *The Great Dance: A Hunter's Story* (2000), a film depicting the lives of tribal men in the Kalahari Desert, Africa. My interest in the film was informed by my background as a wildlife tracker and hunter. The art and science of tracking are deeply connected to the early human ability to procure meat, representing a critical de-

velopment in the survival of the species — alongside tools and fire. The film illustrates how these hunters communicate through gestures while interpreting tracks and signs, and it depicts them gathered around a fire, recounting the events of the day.

Cave paintings, such as those found in Chauvet Cave, France, dating back approximately 36,000 years, represent some of the earliest records of human storytelling. These images mark the beginnings of visual storytelling long before the advent of written language, depicting scenes of hunting, conflict, and human interaction with the environment. Today, we continue to tell stories through city layouts, architecture, and design. Visual signs surround us constantly, if we are attentive enough to notice them.

The development of writing systems marked a significant shift in storytelling. Cuneiform writing in Mesopotamia around 3300 BCE and Egyptian hieroglyphs shortly thereafter enabled stories, laws, and beliefs to be recorded and transmitted across generations. The invention of alphabets further expanded communicative capacity by linking symbols to sounds, facilitating more precise expression (Students of History, n.d.).

Oral traditions and spoken language are equally central to this history. Homo sapiens are believed to have emerged approximately 230,000 years ago. According to an article from MIT on human language, "Language is both a cognitive system and a communication system," Miyagawa notes. "My guess is that prior to 135,000 years ago, it did start out as a private cognitive system, but relatively quickly that turned into a communications system" (Dizikes, 2025). This suggests that while early language may have initially served individual cognitive purposes, it rapidly evolved into a shared system for communication, laying the foundation for storytelling and cultural transmission.

What I find particularly interesting is the cognitive development involved not only in understanding language, but also in communicating it effectively so that others can comprehend it. Individuals capable of conveying ideas, beliefs,

and traditions within their social groups were able to shape and develop their own cultures. It was through the stories they told and passed down that these cultures were preserved and transmitted across generations.

The oral tradition of storytelling had begun.

> "Storytelling is one of humanity's oldest and most powerful tools. From oral myths and epics to modern novels and digital narratives, storytelling has evolved to reflect culture, society, and human psychology. Understanding its history reveals how language, culture, and creativity shape literature, entertainment, and social values" (Popular Social Science, n.d.).

A federal agent once told me that all human interaction is based on manipulation. I had to research and ask questions about this statement. What I discovered opened my eyes and gave me something to think about. When we use the word *manipulation*, it tends to carry a negative meaning; however, we are often manipulated in various ways by friends, family, and loved ones. It can also take a negative form. Manipulation can be broken down into persuasion or coercion. Take a minute to think about this: "all human interaction is based on some form of manipulation." Deception, threats of violence, even praise.

Media and the Transmission of Stories

The medium through which a story is conveyed significantly shapes how it is perceived and interpreted. Over time, storytelling has evolved from oral narratives and cave art to manuscripts, print media, broadcast technologies, and digital platforms. Looking at a timeline from the earliest storytellers — early humans — to the present, it becomes clear how quickly information now travels across the globe. Stories have been shared in many forms: from word of mouth to early stone inscriptions, to parchment and scrolls, then newspapers, the telegraph, telephone, radio, television, satellites, the internet, and now smartphones and social media.

"Going viral" refers to information that can be seen by millions of people on social media in a very short period of time. The social media medium allows users to interact, share, and respond, which is why it is essential to be cautious about the information you consume and distribute. Always check the source. Misinformation and disinformation are not only tools used by governments, but also by individuals or groups who take pleasure in creating chaos and spreading fear. It is essential to verify sources.

As noted, "It (referring to the medium) plays a crucial role in how the message is perceived, interpreted, and understood" (Abbas, 2024). "Modern storytelling increasingly blends technology, interactivity, and multimedia, expanding the ways humans share and experience narratives" (Popular Social Science, n.d.).

For generations, mass media — including newspapers, radio, and television — have been trusted sources of information for the general population. However, history and experience suggest that audiences have, at times, been deceived or manipulated. As a quotation attributed to Edgar Allan Poe on Goodreads warns, "Believe nothing you hear, and only one half that you see" (Goodreads, n.d.).

Religion, Politics and the News

These are the "hot button" topics that are often avoided in the workplace. I have always been advised to keep my opinions to myself. However, to understand the power of stories and skilled storytellers, one need look no further than religious leaders, politicians, or the nightly news.

Politicians, for example, not only promote themselves but also convey a narrative designed to secure elections and maintain influence while in office. In many cases, these narratives may contain only partial truths, with the remainder reflecting opinion; yet they shape public perception, motivate the masses, and can even mobilize a nation into action. Over the years, numerous leaders have delivered speeches that exemplify this power.

Religious leaders operate in a similar manner. Holy texts contain the word of God and tell stories that provide guidance on how to live. These narratives have shaped behavior and influenced culture for generations. Questioning these stories is rare, and the authority of the text itself reinforces its influence. This observation is not a critique of religion or its followers, but rather a reflection on the enduring impact of storytelling.

Similarly, storytellers on the nightly news, even while reading from a teleprompter, are able to capture and maintain audience attention — much like actors in a film or theatrical production. They understand how to engage and relate to viewers. The question, then, becomes: what is the message being conveyed?

Propaganda

"I want you" Uncle Sam recruitment poster used during wartime to recruit new servicemen and women into the military.

Propaganda can be defined as the "dissemination of information — facts, arguments, rumors, half-truths, or lies to influence public opinion" (Smith, 2026). This form of communication is often employed to manipulate or influence the opinions of groups in order to promote a particular cause or belief.

As a young man fresh out of high school, I left to serve my country and help defend Europe from Soviet aggression and communism. The slogan "Better dead than Red" was commonly heard. While stationed overseas, I began to realize that, fundamentally, all people desire the same basic necessities: shelter, food, water, love, and the opportunity to create a better life for their children. Those on the other side of the Berlin Wall during the Cold War were simply human beings with their own stories, just as I had mine. This raises an important question: how did propaganda shape our culture?

Dr. Steve Kelman of Harvard University noted, "I am reminded of the famous statement by Nazi propaganda minister Joseph Goebbels that if you repeat a lie often enough it becomes the truth" (Association for Psychological Science, 2016). Goebbels' statement describes the Illusory Truth Effect, a psychological phenomenon where frequent repetition makes false or misleading information seem more credible, a tactic used in propaganda.

During the Cold War era in the United States, the CIA initiated Operation Mockingbird, a program through which elements of the news media and journalists were used to disseminate propaganda (U. S. Senate, Select Committee on Intelligence, 1996). Through slogans, headlines, and news reports, public perception was influenced, and, to some extent, the way people understood the world was shaped and controlled.

Changing the Story

If we accept that stories shape culture, then an important question follows: are all stories real and truthful? I was often told that every conspiracy contains a thread of truth. Propaganda represents one level of influence; the next level is the deliberate creation of a narrative.

As one character states in the 2007 film *Shooter*, "The truth is whatever I say it is" (Shooter, 2007). This line, though fictional, reflects a broader concern about the power of narrative control.

Militaries around the world have long used stories to shape the battlespace. This may involve efforts to "win the hearts and minds" of opposing forces, as well as to influence public opinion on the home front. Soldiers working in public affairs and civil affairs units routinely engage in this form of strategic communication. A less frequently discussed dimension of this process is Psychological Operations (PSYOP).

According to the U. S. Army, "PSYOP soldiers build relationships with leaders and civilians around the world to gain trust and influence. The information is meant to help shift beliefs and behaviors in America's interest, influencing behaviors, beliefs, emotions, motives, and reasoning of governments and civilians using all forms of media, including cyber warfare and deception" (U. S. Army, n.d.). These soldiers directly support military objectives by creating narratives intended to influence both opposition forces and civilian populations.

In a conversation I had with a soldier working in PSYOPs, I asked, "What will you do after your service?" He replied, "Do what most do with my experience — work in politics or advertising." This was not the answer I expected. During his combat rotations in the War on Terror, he explained that his team's mission was relatively simple: "Find out what is being said within the battlespace. Create our own talking points to counter the enemy's narrative. Spread information within the battlespace to shape outcomes in our favor."

It is important to recognize when one is operating within a psychological operation. There are several key points to consider. How does the story make you feel? Are specific words being used as emotional triggers? Always analyze the source of the information and examine the available evidence. Are the headlines sensationalized? In many cases, headlines have very little to do with the actual content of the story. It is also important to question the timing, intent, and motives behind the narrative. I was always taught to avoid single-factor reasoning and to ask questions. Look for the presence of heroes and villains, and for simplified "good versus evil" dynamics.

As Chase Hughes argues, "if the opinion that's coming out needs people to be silenced, it's a psy op" (Hughes, 2025).

DISCUSSION

The analysis demonstrates that storytelling functions as both a cultural foundation and a strategic instrument. Stories unify groups by creating shared meaning, but they can also divide societies when used to manipulate perception or legitimize conflict. The distinction between persuasion and coercion is often blurred, particularly in political and media contexts.

Understanding narrative mechanisms is essential for recognizing when individuals and societies are embedded within psychological operations or propagandistic frameworks. Emotional triggers, simplified moral binaries, sensationalized headlines, and selective framing serve as indicators of narrative manipulation.

CONCLUSION

Understanding how, when and why stories influence us and our culture should help us in understanding our history and how we interact with each other. Stories are not neutral. They shape culture, influence behavior, and define collective memory. Cultural misunderstanding often arises not from malice but from failure to recognize the narratives that shape perception. Cultural differences bring up difficulties in every aspect of our life even on a global scale. It affects international relations and commerce. Not understanding the culture means not understanding the people. Failing to learn to communicate effectively can lead to conflict. Stories can move people. Stories create cultures. Stories have power especially in the hands of a storyteller.

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REFERENCES

Abbas, S. A. (2024, November 1). The role of medium in communication. Medium. https://medium.com/@ssohailabbas529/the-role-of-medium-in-communication-7bcae19f263c

Association for Psychological Science. (2016, November 9). How liars create the illusion of truth. https://www.psychologicalscience.org/news/how-liars-create-the-illusion-of-truth.html

Dizikes, P. (2025, March 14). When did human language emerge? MIT News. https://news.mit.edu/2025/when-did-human-language-emerge-0314

Foster, C., & Foster, D. (Directors). (2000). *The Great Dance: A Hunter's Story* [Film].

Goodreads. (n.d.). Quote by Edgar Allan Poe: "Believe nothing you hear, and only one half that you see." Retrieved May 9, 2026, from https://www.goodreads.com/quotes/252780-believe-nothing-you-hear-and-only-one-half-that-you

Hughes, C. (2025, March 18). *How to spot that you're in the middle of a psyop* [Video]. Facebook. https://www.facebook.com/watch/?v=1320385043436353

Merriam-Webster. (n.d.). Culture. In Merriam-Webster.com dictionary. Retrieved May 9, 2026, from https://www.merriam-webster.com/dictionary/culture

Popular Social Science. (n.d.). The history of storytelling: From oral traditions to modern literature. https://www.popularsocialscience.com/history-of-storytelling/

Shooter. (2007). *IMDb*. https://www.imdb.com/title/tt0822854/

Smith, B. L. (2026, April 28). Propaganda. Encyclopaedia Britannica. https://www.britannica.com/topic/propaganda

Students of History. (n.d.). Early writing systems: Cuneiform, hieroglyphics, & Phoenician alphabet. https://www.studentsofhistory.com/early-writing-systems

Traill, A. (n.d.). Click languages. Encyclopaedia Britannica. https://www.britannica.com/topic/click-languages

U. S. Army. (n.d.). Psychological operations. https://www.goarmy.com/careers-and-jobs/specialty-careers/special-ops/psychological-operations

U. S. Senate, Select Committee on Intelligence. (1996). CIA's use of journalists and clergy in intelligence operations: Hearing before the Select Committee on Intelligence of the United States Senate, One Hundred Fourth Congress, second session, Wednesday, July 17, 1996. https://www.intelligence.senate.gov/wp-content/uploads/2024/08/sites-default-files-hearings-ciasuseofjournal00unit.pdf

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Anschrift:
Neuwiehler Str. 33, D-51674 Wiehl

Telefon: +49 (0)151 54284669
E-Mail: hello@sci-result.de

Geschäftsführer:
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