Article

The Ethical Need for a New Type of Tax Norms in The World of Artificial Intelligence

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Received 30 July 2024, Accepted 15 September 2024

KEYWORDS:

Artificial Intelligence, Machine Learning, Tax, Fairness, Metaethics, Digital Objects, Ontology, Compliance, Equitable Society, Risk Analysis

ABSTRACT:

This document justifies the need for changes in tax regulations as a consequence of the implementation of Artificial Intelligence (AI) and explains the reasoning behind it. First, an ontology of this particular type of digital objects is provided; they are categorized by their essence, and their specific difference from algorithms is highlighted, making it possible to regulate them in a differentiated manner. Next, the fairness of the use of various objects in each type of application in Tax Administration is analyzed from the perspective of metaethics. Although there is no single paradigm for the concept of AI and different conceptions of tax justice exist, a path is shown, from metaethics, to analyze whether statements related to the use of AI are truth-apts, coining the concept of melismatic endoxa. This strategy and concept allow for the cross-cultural analysis of implementation methods.

In the final phase, the confusing term "machine learning" is first criticized, as it leads to misuse in the deployment and use of AI. Following this, the problems associated with the use of so-called Artificial Digital Objects in Human-In-The-Loop (HITL) and Human-On-The-Loop (HOTL) approaches are described. The final phase demonstrates that the traditional approach to the nature of the legal-tax relationship should change. The concepts of "multi-sided" relationships by J. Tirole and *pullulatio* from scholastic philosophy are used to denounce the abusive use of risk analysis techniques based on correlation.

PALABRAS CLAVES:

Inteligencia Artificial, Aprendizaje Automático, Impuestos, Equidad, Metaética, Objetos Digitales, Ontología, Cumplimiento Normativo, Sociedad Equitativa, Análisis de Riesgos

RESUMEN:

Este documento justifica que deberán realizarse cambios en las normas tributarias como consecuencia de la implementación de la Inteligencia Artificial (IA) y señala el motivo. En primer lugar, se aporta una ontología de este tipo particular de objetos digitales, se categorizan por su esencia y se muestra su diferencia especifica frente a los algoritmos, lo que hace posible regularlos de forma diferenciada. A continuación, se analiza la equidad del uso de los distintos objetos en cada tipo de uso en las Administraciones Tributarias desde la perspectiva de la metaética. Aunque no exista un paradigma único del concepto de IA y existan distintas concepciones de la justicia tributaria se muestra un camino, desde la metaética para analizar si las declaraciones relativas al uso de la IA son truth-apts, acuñando el concepto de endoxa melismática. Se justifica que esta estrategia y el uso del concepto permiten analizar con validez transcultural los modos de implementación. En la fase final en primer lugar se denuncia el confundente término "machine learning" que conduce a un abuso en el uso y despliegue de la IA. A continuación, se describen los problemas asociados al uso de los denominados Artificial Digital Objects en los enfoques Human-In-The-Loop (HITL) y Human-On-The-Loop (HOTL) en las Administraciones Tributarias
En la fase final se muestra que el enfoque tradicional sobre la naturaleza de la relación jurídica fiscal debería cambiar. Se utilizan los conceptos de relaciones "multi-sided" de J. Tirole y de pullulatio de la filosofía escolástica para denunciar el uso abusivo de las técnicas de análisis de riesgo basada en la correlación.

MOTS CLES :

Intelligence Artificielle, Apprentissage Automatique, Fiscalité, Équité, Métaéthique, Objets Numériques, Ontologie, Conformité Réglementaire, Société Équitable, Analyse des Risques

RESUME :

Ce document justifie la nécessité d'apporter des modifications aux règles fiscales à la suite de la mise en œuvre de l'Intelligence Artificielle (IA) et en explique les raisons. Tout d'abord, une ontologie de ce type particulier d'objets numériques est fournie. Ceux-ci sont catégorisés selon leur essence, et leur différence spécifique par rapport aux algorithmes est mise en évidence, ce qui permet de les réguler de manière différenciée. Ensuite, l'équité de l'usage des différents objets dans chaque contexte d'utilisation est analysée sous l'angle de la métaéthique. Bien qu'il n'existe pas de paradigme unique du concept d'IA et que différentes conceptions de la justice fiscale coexistent, une voie est proposée, à partir de la métaéthique, pour analyser la véracité des affirmations concernant l'utilisation de l'IA, en introduisant le concept d'endoxa mélismatique. Cette stratégie et ce concept permettent une analyse interculturelle des modes de mise en œuvre.
Dans la phase finale, le terme déroutant « apprentissage automatique » est discuté, car il conduit à des abus dans l'utilisation et le déploiement de l'IA. Les problèmes associés à l'utilisation d'objets numériques dits artificiels dans les approches HITL (Human-In-The-Loop) et HOTL (Human-On-The-Loop) sont également décrits. La dernière phase montre que l'approche traditionnelle de la nature de la relation juridique fiscale doit évoluer. Les concepts de relations « multifaces » de J. Tirole et de pullulatio en philosophie scolastique sont utilisés pour dénoncer l'utilisation abusive de techniques d'analyse des risques basées sur la corrélation.

Contents:

1 INTRODUCTION

New technologies, especially the convergence of biology with AI, have brought to light concerns and generated a new class of ethical dilemmas. In the field of taxation, the introduction of AI has also raised new moral questions, most of them related to fairness. In this investigation, we examine the problem from the perspective of metaethics, more specifically from the point of view of meta-fairness.

The Encyclopaedia Britannica defines taxation as 'that part of the revenues of a state which is obtained by compulsory dues and charges upon its subjects'. It defines normative ethics as the branch of moral philosophy concerned with criteria for determining what is morally right and wrong, including the formulation of moral rules about what institutions should do.

Normative ethics plays a role in addressing questions such as whether aggressive tax planning is good or bad, or, for example, whether Artificial Intelligence should be used, or not, in compulsory relationships with taxpayers, and how it impacts fairness. Metaethics examines whether the moral statements created in the field of normative ethics are truth-apt. The meta-ethical study of AI addresses, among many other issues, the problem of discerning whether moral statements have the same ethical meaning across different cultures (Gonzalez and Duart, 2024), and in our case, across different tax systems. Additionally, it considers whether moral statements regarding the fairness of the use of AI in Tax Administrations are true.

Philosophers are divided into different schools of thought: cognitivists, who maintain that moral statements are rooted in beliefs; emotivists, who argue that they are based on emotions; and other perspectives. In this investigation, we will explore the concept that we have proposed, 'meta-fairness,' from a declared commitment to the cognitivist school of thought.

Following this introduction, in Section 2 we will: a) justify the necessity of a regional ontology of digital objects in Tax Administrations (DOTA); b) propose such an ontology; and c) identify a subset of these objects, referred to as Active Digital Objects (ADOs) identified by their ternary structure.

In Section 3, we will review taxation and the perception of fairness considering three issues: a) The debate between libertarians and Rawl´s followers; b) the possibility of accepting statements in this field; c) the concept of meta-fairness and, d) from, a cognitivist perspective we will analyze the possibility of truth-apt moral sentences related to the use of AI in taxation,

In Section 4 we will analyze the impact on taxpayers of using different AI objects in Tax Administration, establishing the neat difference between types of digital objects.

The thesis of this investigation is that the use of Artificial Intelligence (AI) in Tax Administrations, will require a new type of tax norms because it creates new kinds of relationships. In Section 5 we will justify the necessity of a new type of legal formal tax norms.

2 ONTOLOGY OF DIGITAL OBJECTS

There is growing interest in the use of Artificial Intelligence (AI) by tax administrations, which has led academia to issue some caveats. Engineers and data scientists are focused on developing new tools, while tax administrations are concerned with their implementation and looking for the best strategy for their use. Their agendas include some consideration of ethical questions, particularly regarding privacy and fairness, but philosophy—and especially metaphysics—is largely absent from the debate. This situation makes it difficult to address fundamental problems.

For Tax Law experts, understanding whether a tool should be considered strictly as AI, whether it is a mere tool that helps in some Information Technology activity and to determine the limits of its appropriate use by a Tax Administration is becoming increasingly relevant and complex. The 'AI paradigm' is far from univocal. There is no consensus even on what the term 'AI' truly denotes. Shopman (1986) has noted, '...no computational paradigm has yet been produced: there is no single generally accepted way to do AI' (Shopman 1987:6). Caplinskas (1998) identifies three AI paradigms: the behaviorist paradigm, the agent paradigm, and the artificial life paradigm. Cristianini (2014) distinguishes four: data-driven AI, statistical AI, knowledge-driven AI, and reasoning-and-search-based AI. The absence of a common concept or paradigm concerning AI's essence suggests that an ontological investigation might be beneficial.

2.1 ONTOLOGY

We distinguish two uses of the term 'ontology':

In Computer Sciences. In this field, the concepts of *computational ontologies* or *engineering ontologies* denote "*machine processable structures*" which represent specific domains of interest" (Husakova and Bures, 2020). An ontology in this context includes "a specific vocabulary (dictionary) used to describe a certain reality, plus a set of explicit assumptions regarding the intended meaning of the vocabulary words" (see Guarino and Giaretta,1995; Guarino, 1998), or, in other terms, a *formal*, explicit specification of a shared conceptualization expressed formally, as is done in HTML or XML when the meaning of something is identified with tags.

The use of these tools, in the field of taxation, could be useful. Consider the Web services that we use every day. They are distributed software components accessed through the World Wide Web. A semantic description of Web services helps to resolve the heterogeneity of service specifications.

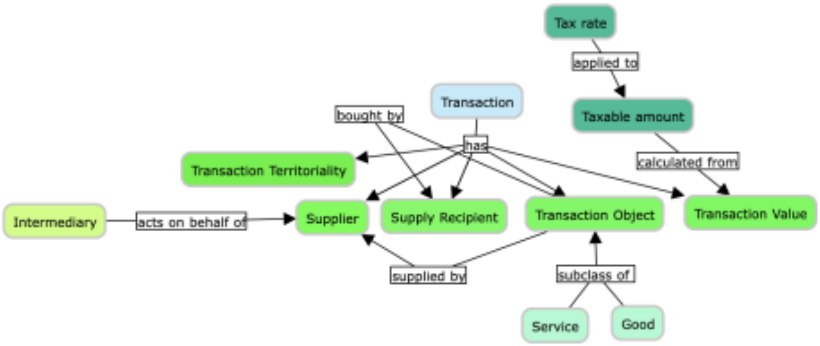

Figure 1. Diagram with a component of OntoVAT.

For example, OntoVAT (**Figure 1**) is a multilingual ontology designed for knowledge extraction, in VAT-related legal judgments. "The main aims of this ontology are to capture the key concepts involved in the European VAT domain and to provide an extendible and reusable knowledge representation to facilitate the automated extraction or detection of VAT-related concepts in legal judgments". (Liga *et al.*, 2023)

Philosophical: The term 'ontology,' which etymologically means 'the study of being,' was popularized by C. Wolff in the 18th century. Its main question is: What exists? When conceived as General Metaphysics, it deals with what is common to all entities—the nature of being, and the different ways of being. In its philosophical approach, ontology (**O**) as a discipline asks: What exists?

Artificial Intelligence is not an entity, is a multifaceted discipline that produces many new digital objects (e.g., ChatGPT, face recognition tools, etc.). Some of these are simple algorithms, while others are very complex. It might be interesting—and perhaps even useful—to create a 'Book of Imaginary Intelligences' as a tribute to Borges (1967), with a Section dedicated to "Imagined AIs" but it wouldn't meet our needs. We want to unify them under a concept. We need an elemental mereology of digital objects as the foundation of our investigation. We will use the dialectic method such as was explained by Plato in the Phaedrus, by "*genus proximum*" and "*differentia specifica*" to build it.

TYPES				ESSENCE	LEARNING MODE	PURPOSE
Artificial	Inmaterial	Digital	Actives	Ternary	Chastened	Creator
					Trained	Classifier
				Bynary		Decider
				Unary		Predictor
			Pasives	Algorithms		Calculate
		Others				
	Material					
Natural						

Figure 2. A Regional Ontology of Digital Objects

We include in **Figure 1** a simple regional ontology, that will be useful for our purposes. The ancient Greek word (φύσις), *physis*, has been usually translated into English —according to its Latin translation "natura"— as "nature". In the first level of dichotomic distinction, artificial entities are clearly distinguished from beings that arise spontaneously from their essence. As Aristotle, we distinguish techne (using a *techné* humans build artificial objects), from praxis (action). The praxis (action) of a Tax Agency requires technical objects, some of

them materials (e.g.: typewriters) and others immaterial that will be classified as digital or "others". We classify the digital ones into unary, binary, and ternary. The last ones can be trained or "chastened",

We will use this basic classification to distinguish them from other objects but do not provide insight into their essence.

The use of new digital tools required regulation, such as digital signature laws (e.g.: the DESIGN Act). Nowadays its use in the praxis is a well-known field and the resistance to accept digital entities is seen as a manifestation of technological backwardness, but we aim to find rules that allow a fair use of AI from the point of view of metafairness.

2.2 Artificial Digital Objects (ADOs) As Trinities.

The essence of AI ADOs is radically different from the essence of other digital objects, such as songs, apps, or algorithms.

In Aristotelian terms, natural objects have two components, substance, and form (*morphé*). Material objects, with their presence, tell us about their existence. We can surpass mere perception and reach knowledge over them using what Kant called *pure intuition*. He, in his *Theory of Critical Reason*, maintained that from perception through the senses it is not possible to grasp the thing in itself (*noumenon*), but that the human being, through schemes, can have a pure intuition (*a priori*) of things, giving them the form of space and the time. Through schemes, we know that "this thing" is "in this place", and "now".

With digital objects, this simple thing is impossible, and we need mediators, computers, and software, to have a mere appearance, an "effect of surface". These objects are not in space; they populate cyberspace. Probably it would be better, to consider them "events", following Whitehead, instead of objects. Tax Administrations use in their *praxis* Digital Objects (DO), and need mediators even to know where, what, or whether they are.

Our problem now is to discern the common essence under the "multiplicity" of these objects and justify the difference.

When A. Turing and J. von Neumann conceived computers, they thought in *digital* contraptions. They were built in the form of advanced electronic machines, like many others, but the core of the advancement was not their electronic essence but their "digital" essence. Alan Turing in 1936 described precisely a type of machine that, reading, writing, remembering, and deleting marks in someplace, for example, a paper tape could emulate any other computing machine. The astonishing advancement was the capacity to separate "numbers that tell" (data) from numbers "that do" (code) and make them cooperate to reproduce the work of any other machine (Dyson, 2015).

Oxford English Dictionary´s earliest evidence for *parameter* (Greek: *Besides, metron*) is from 1656, in the writing of Thomas Hobbes. In Statistics, they quantify numbered amounts of traits of a population. Artificial intelligence has given relevance to these *parameters*. AI products are assemblages of three classes of different data, two types are given (data and code) and one is created (parameters) in its initial setting or during the training process. The code uses data as input to calculate parameters as output in a process that fits a model. The assemblage changes with each recalculation of parameters. The set of them becomes the "*differentia specifica*" that distinguish a model from others and each specific set of parameters an "individual". We have found that the changing relationship between types (of data) defines the essence of an AI.

The *perychoresis* (recapitulation) is a theological term translated to Latin as *circuminsessio* and used by Aquinas to explain the Trinity with a double meaning: to be seated (three Persons in this case) in the same "place" and to "dance intertwined" as only one dancer. In

AI, these "*personae*" (those that tell, that act, and that create the difference) are also in a continuous dance.

The file with a song contains data that tell (unary), algorithms are machines that process data and are in essence binary (code and data), and AI products are ternary ADOs.

Hills (2015: 47) proposed a formal definition of an algorithm as "a mathematical construct with a finite, abstract, effective, compound control structure, *imperatively given*, accomplishing a *given purpose under given provisions*". If they are accused of falsehood, elucidating the case before the Court of Truth is always possible, although if the code is long, it can be arduous.

The term AlgorAI (Gonzalez and Duart, 2024) describes a "digital event". In each event, the difference emerges, and each AlgorAI combines an algorithm with an AI procedure in an assemblage. We group all these assemblages under the label Active Digital Objects (ADOs) conceived as trinities of data, code, and parameters.

We distinguish two types of ADOs and two classes of reality. One thing is a hammer, an entity, and another is the action of hammering an event. We distinguish two types of ADOs, Models (ADOMs) and Acts (ADOAs).

ADOMs are tools shaped, "trained" with data, fitting an abstract mathematical model and ADOAs are assemblages that use ADMOs, for classification, prediction, and other purposes. They differ by complexity and by intentionality.

ADOMS are conceived by data scientists and built using Python or other languages (code). Analysts use fiscal data to train their components, such as mathematical models (e.g.: regression or KNN). Their parameters change each time that they are retrained with new data.

When a Tax Administration builds a bridge from the numeric realm, between abstract space and the real world, where persons have rights, the creation of ADOMs does not involve any moral decision.

On the contrary, the use of ADOAs raises two issues from the perspective of normative ethics: a) whether the Tax Administration uses ADOMs that are sufficiently effective, and b) whether the use of a specific ADOA is ethically justifiable. The former is a technical question, while the latter must be addressed within the realm of normative ethics. Based on these considerations, Tax Law must establish the limits of their use, and we try to identify the causes of this necessity. The first thing we should consider is whether these moral statements in the field of taxation are truth-apt.

2.3 CONTENT AND FORCE OF ACTIVE DIGITAL OBJECTS (ADO)

The use of AI must be regulated because it causes impacts. ADOAs are used to decide with consequences or to inform decisions, which we can express in statements. The design, assemblage, and use of ADOAs are intentional.

The noun power signifies "the ability or capacity to do something or act in a particular way" and "the capacity or ability to direct or influence the behavior of others or the course of events". Use of ADOAs changes the course of events and this happens because someone decides to automatize a decision or because the information provided by ADOAs is uses to build statements that justify actions.

The terms *illocutionary* act and *illocutionary* force were introduced by British linguistic philosopher John L. Austin in *How to Do Things With Words* (1962). The theory of speech acts distinguishes the act of making a statement with "illocutionary force" from other acts that may be performed concomitantly and that possess "perlocutionary force"— as when, for

example, stating "I do" in the context of a marriage ceremony thereby effects an actual legal reality. ADOAs can perform speech acts (e.g., ChatGPT) in natural language or provide sets of numbers in a symbolic context (mathematical language) that goes beyond mere utterances.

The outputs of these tools can be implemented with two approaches: Human-In-The-Loop (HITL). It is the case when processes require human intervention, such as the decision to audit a taxpayer after its risks have been quantified by an AI; Human-On-The-Loop (HOTL), when the decision is adopted without human intervention.

Our approach is to distinguish in ADOAs three power, forces, that should be controlled in its HITL use. The powers of speech acts:

Locutionary power. They have merely declarative content (e.g.: a chunk of Java code), that has value (intellectual property, know-how) or the elocutionary power of a song. They have the power of informing and communicating.

Illocutionary. The ADOMs are assembled with a specific intention (e.g.: insert a row in a table "Object in C++"). The purposes of ADOAs are more complex: a) *Judicative*; b) *Executive*, c) *Behavioural* which involves reacting to a situation.

ADOAs can be used in decision-making, dispute resolution, clustering, recommendations, or predictions. So, a system built to recommend applicants in the process of admittance to a university would be an ADOM of the class trained. If used to select without additional filters, would be an ADOA used in a HOTL. In both cases with a illocutionary force oriented to classification. The software engineer would be responsible for the ADOM and the university for two things: the ADOA and selecting the HOTL Model.

Perlocutionary content. They are the effects caused beyond their immediate purpose and concerning the recipient due to the adjudication of some force. (e.g.: the effect of the diffusion of the use for Tax Administration of surveillance cameras and real-time access to credit card payments in Income Tax or VAT returns. In our example the acceptance or refusal of the applicant.

F. Brentano highlighted the intentionality of psychological acts. Tax Administration could have vicarious liability "for the assemblage of ADOAs in HOTL schemes". The act of using AI with a purpose that expresses its illocutionary force is intentional and Tax Administration could have vicarious responsibility for its perlocutionary effects.

We need to classify all actions (intentions) that can be performed by an AI in the field of taxation because Tax Administrations have specific aims, and the illocutionary force of their deeds must be controlled.

There is general agreement on the idea that the capacity of actual AI can´t be denoted as "intelligence". Kurzweil and others have exposed the concept of "Singularity", the moment when machines will reach "General Intelligence". Forty years ago, they noted that we would need to wait forty years to see this technology. They have not changed their prognostic. From the point of view of normative ethics, is relevant to know if a General Intelligence, wiser than humans could take control of our society, but this is not the case that we are investigating.

Tax Administrations use assemblages of ADOs with different intentions: a) Classify (e.g.: risk analysis in the selection of taxpayers for intensive controls); b) Decide; c) Predict (e.g.: the anticipation of taxpayer behavior); Create (e.g.: Generative AI).

The decision to achieve their objectives using these tools brings forth the need to evaluate the fairness of their decisions.

3 TAXATION AND FAIRNESS

Artificial intelligence tools could inadvertently amplify the power of the State, and many taxpayers believe that its use, if unruled, crosses a red line. In this investigation, we do not address normative ethics questions, such as whether certain actions by Tax Administrations are good or bad, but we want to discern whether the actual existence of truth-apt statements with moral content for Tax Administrations is real

3.1 THE MARKET AND THE CATHEDRAL

"The cathedral" is just a short way to say "journalism plus academia"—in other words, the intellectual institutions at the center of modern society, just as the Church was the intellectual institution at the center of medieval society.…[] The Catholic Church is *one* institution—the cathedral is *many* institutions. Yet the label is singular. This transformation from many to one—literally, e *pluribus unum*—is the heart of the mystery at the heart of the modern world. (Yarvin C, 2021)

Determining whether something is true or not is challenging. We currently find ourselves at a crossroads in moral questions, unsure whether the Court of Truth lies in the Market, the Cathedral, or within the cathedral. Taxpayers hold mixed opinions and feelings about taxes. Some approach the issue from the perspective of being members of society and feel comfortable analyzing the pros and cons, drawing ideas from the Market. On the other side of the growing debate is 'The cathedral,' where Ethics and Dogma coexist, and where pragmatic activists argue that taxation is both necessary and fair.

Martin Crowe, a Catholic priest, wrote a doctoral dissertation titled "The Moral Obligation of Paying Just" (1944) summarizing centuries of theological and philosophical debate on this topic. Since then, not much has been written on the topic and we should consider it as a symptom of the decadence of the moral interest in the issue of justice on taxation. The debate has moved to another topic, freedom.

Something recognizable as taxation began as simple plundering (Ormrod et al., 1999). Centuries afterwards, Tax administrations began controlling taxes using norms, ruling sales taxes in Rome, or creating a census as Domesday Book (2). These norms acquired complexity in excises as "*alcabala*" and "*gabelle*" requiring at the end the introduction of Tax Codes to protect their rights. Century after century changes were characterized by simultaneous increases in efficiency and fairness that affected more and more people.

We identify two extreme poles in the feelings of taxpayers. One of them considers that taxation is theft. It is defended by many "tribes", anarcho-capitalists, anarcho-communists, right-wing libertarians, left-anarchists, and libertarian socialists with historical and philosophical reasons. They remind us that the study of taxation leads to a semantic field that includes terms such as loot, forced "protection", and undesired permanence until being paid off (*Dannegeld*). They believe that contractual approaches, such as of the Romans, that considered that what they collected as taxes was merely just payment for maintaining "law and order", was a rationalization of an extorsion. One of their sacred books is Robert Nozick's Anarchy in "State and Utopia" (1974). Following Herbert Spencer explains that taxpayers remain slaves via income tax. Individuals are forced to give up the fruits of their labor to others under the threat of violence against them. Facing them members of the cathedral follow, for example, Rawls's ideas and note to that the idea of regulating bequest and restricting inheritance is connected with realizing *fair* equality of opportunity

Aristotle showed us that this type of discrepancy cannot be resolved using reason. Thinkers entrenched in such extreme points of view can only recognize these inconsistencies. Nozick and Rawls, among others, build their theories on different principles. In the worst case, their

theories, based on moral statements, would not only be undecidable but also not truth-apt—in other words, nonsense, merely a rationalization of the exercise of power.

3.2 Taxation Theory as an Entitled Melismatic Endoxa

In the cathedral, the ideas evolve because there is a space for debate and an accepted methodology.

Parmenides famously distinguished "The Way of Truth" (*aletheia*, ἀλήθεια), and "The Way of Appearance/Opinion" (*doxa*, δόξα). Greek philosophers ordered the modes of knowledge. Plato in the dialogue Gorgias, describes *doxa* as being a belief, unrelated to reason giving it a low level of quality of knowledge only a little better than art, that is imitation of imitation. The problem is not that different points of view generate separate agendas because this could expand the knowledge; the problem is that sophism promotes rhetoric but inhibits the scientific debate with other groups, forcing them to deal with the problem in another field (e.g.; from economy to ethics or politics).

Aristotle considered doxa as the first step in finding knowledge (*episteme*) and categorized "*the accepted truths of the physical world that are passed down from generation to generation*" as "*endoxa*". We can recognize a social, collective "*endoxa*" in the fiscal field. Truths passed down about invariants in societies.

In natural sciences, there are questions that a scientist can solve through what Kuhn calls 'exemplars', after an "*experimentum crucis*". After a travel to the moon, no one could genuinely believe that the earth was flat. In social sciences, this type of evidence does not exist, and an author could write glowing things on AI working for Google and the opposite working for Tax Administration. We will not find a natural law, but we can create another thing, a "melisma".

Melisma (Greek: μέλισμα), is the singing of a single syllable of text while moving between several different notes. In the chorus. For example: "For Unto Us, a Child Is Born" [George Frideric Handel's (Part I, No. 12)] soprano and alto lines engage in a 57-note melisma in the word born. We believe that in the field of taxation knowledge is a "melismatic entitled endoxa". Knowledge of academics, practitioners, and taxpayers is included in schools and visions, but not always dogmatic, as is the case in theology. Entitled opinions are open to changes, so they evolve with the experience of the best practices and are passed to others, and in good practices, we find *melismas*, when we use the same words in different scales. We can build harmonies when scales are well-tempered.

In the field of taxation, each concept is evaluated on several scales, and specifically on an ethical scale at each moment in time. The moral evaluation of an idea in taxation is also a melismatic endoxa. Is a mixture of opinions, such as honey (lat, *melis*) is the product of the work of many the blend of many "melus", that can be stored and pass from generation to generation (endoxa).

Some have tessellated the Chapel of the Economy in the cathedral with mathematical expressions. In the Cambridge debate: *Economics: an art not a science* Dr. William H. Janeway, told Michael Kitson, Senior Lecturer in International Macroeconomics at Cambridge. "I am not convinced that the failure of mathematical economics can be repaired by doing more maths". We are convinced that the problems of the Tax Administration can´t be solved with AI. The only thing that we can do, as always, is to change some of them for others.

Over the years, people have rejected many types of taxes (e.g., chimney taxes in England, window taxes, hat taxes, etc.), while others have been progressively accepted. Similarly,

many tools have been initially rejected (e.g., digital documents and signatures) and later assumed.

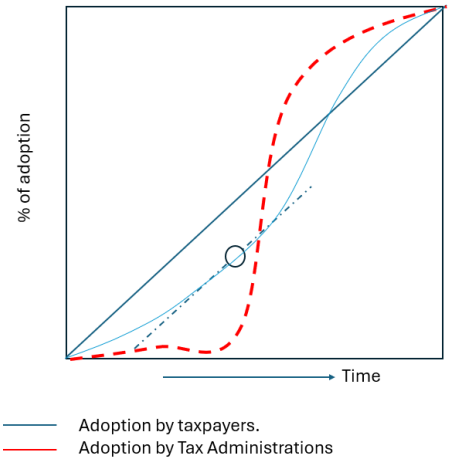

Figure 3. Curve of innovation. Taxpayers' vs Tax Agencies

In Figure 3 we show the path that Tax administration has always covered as one more of those who innovates. We follow an idea that famously, Schelling explained in "Micromotives and Macrobehavior", discussing the phenomenon known as "critical mass." For example, if enough people clap at the end of a performance, then the whole audience claps; however, if just a few claps and no one else joins in, it will awkwardly stop. Critical mass can be described as something that relies on "how many" people are doing something, and not necessarily "what" they are doing.

This applies this model to the use of AI. Big Software companies, after the failure of blockchain and the concept of metaverse, are betting on Artificial Intelligence. The "hype" is so manifest that some big banks such as Goldman Sachs have been moved to consider rationally the potential benefits. (Sobel, 2024).

Nobody knows, but in a few years in the future, the use of AI will reach a critical mass the probability for each new citizen of using it will surpass 0.5 and this type of tools will be so common as social networks today. If it is the case, Tax Administration will not need to decide, they will be obliged to implement agents and other tools to communicate and interact with taxpayers. The curve of adoption for Tax Administrations is delayed in relation to the curve of citizens. In the actual circumstance to explain the advantages of the use of AI for Tax Administration is difficult, as was the idea of imposing a tea tax in Boston, which was undesired, even when had a lot of rationality.

In the meantime, for ethical and practical reasons is good to be able to sustain truth-apt sentences about the fairness of Tax Administration behaviour.

3.3 METAFAIRNESS

The establishment of artificial intelligence as a field of academic research dates back to the 1950s (McCarthy et al., 2006, 1955). The ethical debate is almost as old (Samuel, 1960; Wiener, 1960), but the current hype of AI systems has brought the risks of AI for society into sharper focus (Yang et al., 2018).

We must examine the principles that should guide the use of AI in taxation: It is critical to accept those endorsed by the academic community and to complement them if necessary.

Floridi[1] (2019) has identified six high-profile initiatives established in the interest of socially beneficial AI. Summarizing, they yield 47 principles. If we compare these sets with the four core principles commonly used in bioethics: beneficence, non-maleficence, autonomy, and justice there are many superposed. Floridi et al. argue that a new principle is needed in addition: **explicability**. The suspicion of injustice, and the difficulty of solving tax problems, will slow down the deployment of AI in Tax Administrations.

These principles do not have the same relative importance in each tax administration, and there is no consensus among taxpayers in each country. We need to know even if the melismatic voices in the cathedral use truth-apt statements. A common symbolic language and vision are enablers of a fruitful analysis of reality.

3.4 Taxing the Desert of the Real with a Zero Institution

Many citizens believe that they have found, as Neo in Matrix, "the red pill" in social networks. They feel that they live into a koyaanisqatsi, which means in Hopi language a "life out of balance", and the most cultured among them that they are a "Dasein" thrown to the "desert of the real" and are, generalizing the concept of M.Weber, disenchanted. They feel, in Lacanian terms, that the "truth" of our societies, with their collateral effects (e.g.: instability, precarity), is not something "real" (good for some and bad for others). They believe there is a *Matrix*, built by big companies and made acceptable by authorities, which interposes a screen of "phantasy" built on narratives (Patterson et al., 2003). But, even so, taxpayers and beneficiaries of the solidarity share a vision. Tax Administration, such as the force of gravity, is always there.

The Society is now split, not by classes, but by visions. Lévi-Strauss wrote about the wannebago, a tribe on the borders of the Great Lake, that was divided into two (*moieties*). When the anthropologist asked its members to draw something about the tribe, both groups represented the tribe with a circle, but the inner structure was conceived and explained in different ways. One group drew two concentrical rings, and the others split the circle into two segments with a straight line. This difference expressed two visions of an inner primal antagonism and of the effort of both groups of members of the society trying to depict the order with alternative symbolic structures.

S. Zizek has developed the concept introduced by Claude Levi-Strauss, the "zero institution" (Zizek 2001: 221–3). A zero institution is an empty signifier. It has no determinate meaning but instead signifies the "presence of meaning", but not the existence of a being. It has no positive function – all it does is signify institutionality as such (as opposed to chaos).

The concept of the zero institution helps explain how people with radically different descriptions of their role in a collective reality nevertheless understand themselves as members of the same tribe under the rule (for good or bad) of the Administration. Tax administrations are 'zero institutions' that provide the possibility of achieving a symbolic order, even for people who do not pay taxes and who only receive aid. For them subventions are a form of "mana", that gives meaning.

"Taxpayers" is the concept that designates the unity of society in the face of radical antagonism. Some of us see ourselves as points in the ring, with different degrees of proximity to the centre, and other groups as points in a "*moitie*" (e.g.: class) facing another group.

[1] See the Asilomar AI Principles (Asilomar Conference on Beneficial AI, 2017), the Montreal Declaration for Responsible AI (Université de Montréal, 2017), the IEEE Ethically Aligned Design (IEEE Global Initiative, 2017, p. 6), the Statement on Artificial Intelligence, Robotics, and 'Autonomous' Systems by the European Group on Ethics in Science and New Technologies (EGE, 2018, pp. 16–20), the UK House of Lords Artificial Intelligence Committee's report AI in the UK: Ready, Willing and Able? (House of Lords, 2018, §417), and the Tenets of the Partnership on AI (Partnership on AI, 2018).

We have described how it is possible to reach fair decisions about the use of AI in Tax Administrations, consensus using a method that combines sampling and differential geometry (Gonzalez and Duart, 2024) in an investigation promoted by the Jean Monnet Foundation concluding that there are truth-apt sentences on taxation related to the use of AI-based on evidence and that the use of ADOAs could be calibrated.

4 THE USE OF ADOAS IN TAX ADMINISTRATIONS

4.1 AI DOES NOT LEARN AND DOES NOT USE "DATA".

AI components, (ADOMs) are trained with data, a term that has its origin in *datum* (the given) chosen by us, so it would be most precise to tell that they are *elected*. We, in our dialectic process, distinguish ADOAs, that are trained from those that are "*chastened*", that is that fit their parameters by playing against themselves in games such as tic-tac-toe, chess, or GO. They learn by losing.

From the point of view of fairness, the use of digital objects of the class "trained" implies the risk of the use of a wrong election of data and the use of tools of class chastened, incomplete experience.

The acceptance of the term "machine learning", associated with terms such as supervised or unsupervised learning in the field of AI is almost "animist", and implies an analogy and extensive use of the concept "to learn". ADOMs do not learn, they recalculate parameters as thermostats adapt to the temperature. We distinguish:

a) To learn: is "to gain knowledge or skill by studying or from experience". This process improves the capacity to tell the truth.
b) Fitting: Recalculate parameters reprocessing with new data. This process uses correlation, the lower form of knowledge for Hegel, to calculate the parameters of ADOMs and diminishes the abstract mathematical "distance" to an objective.

We will see in the next paragraph the risks for taxpayers of the use of ADOAs implemented under the ingenuous idea that have "learned".

4.2 SELECTION OF TAXPAYERS FOR CONTROL

There are many definitions of intelligence. Our favourite is in the Bhagavad Gita: "The capacity to see things from the right point of view". In terms of classical philosophy, there is a distinction between two components of intelligence, (*dianoia/nous*). These distinctions express the opposition between discursive reason and the holistic capacity for the comprehension of whether something is true or real.

Tax Administration, since the XIX century, has used statistical tools and in the last decade advanced analytics (e.g.: KNN) and econometric tools (e.g.: ARIMA) in their efforts to order the reality and forecast the future. The parameters of the distribution of the behaviour of taxpayers, can be quantified with the use of advanced analytics, but this fact has moved Tax Administrations into dangerous ideas. Some tax managers believe that taxpayer behaviour can be predicted using discursive reasoning and ADOMs, but this is impossible. A taxpayer will not decide to avoid a payment based on a natural law like those discovered by Newton. When we deal with a specific person its conduct can´t be anticipated with discursive reason.

In terms of the debate between Keynes and Hicks, risk analysis in games, such as playing dice, can be quantified using the laws of probability. On the contrary, the future fraud of a taxpayer is in its strict terms "uncertain", because there is a new component, free will.

King Wen and his son Chou in China, in 1000 BC, understood, with astonishing cleverness, the difference between the problem of the prediction of the future, the prediction of Fate,

which is a problem related to the becoming, and the decision on what we should do, given a prediction. The former is a technical problem, a moral one requiring a sapiential approach. So, when an ADOA decides or recommends an action, given some parameters (Bayesian calculus) given some "elected data" the decision has a moral content.

In this sense, we believe that the mission of the Tax Administration is not to forecast taxpayer's behaviour. It is useful and efficient, to send different types of communications to taxpayers but it is not clear that the principle of proportionality covers these actions.

Risk Analysis is the "mantra" of Tax Administration. The inclusion of a person into a group labelled as "of risk", has practical and moral relevance and is a form of "chauvinism of risk analysis".

For example, the opening of a residence for old people in my neighbourhood will increase the rate of mortality in my postal code. Even so, it would be unfair for my assurance company to change the price of my life insurance policy. On the contrary, it is assumed that if fraudsters move to my postal code my fiscal risk changes even when this spurious cause can be isolated in a good ADOM.

Inspectors are not the type of investigators described by Phil Dick and depicted in Minority Report. They can´t know the future and they can´t know the past. Their mission is not to forecast *given* a level of risk. Their mission is to decide what to do, given some *data* and *given* a calculated level of risk and *given* that some principles must be applied with independence of the perlocutionary power of tools. These are moral decisions related to fairness and we want to know if there are truth-apt sentences based on evidence, letting us believe in them following a cognitivist approach that could be useful in these kinds of dilemmas.

From the point of view of Tax Law, this has relevance. In the past, the work of Tax Administrations was done by civil servants trained. Their knowledge was not complete, and they were organized in structures to provide guarantees to taxpayers knowing that error was embedded in the system of "experts". From the philosophical point of view, the taxpayer will not face if AI is deployed, decisions based on perfectible knowledge, they will face acts of divination disguised as learning, and these acts have moral content.

4.3 New types of relationships. Avoiding the "pullulatio"

We distinguish data^{c}, data collected compulsorily under the principle of proportionality, and data^{g}, (data given), such as the price of an article and the number phone of the seller published on the Internet. Tax Administration decisions are adopted using a combination of both.

Formal obligations are related to data associated with the declarant directly (e.g.: sales volume, postal code), or indirectly (e.g.: postal code of the customer). Information systems can easily build networks of relationships. They are modelled with this purpose (e.g.: Entity-relationships model).

It is possible to calculate the risk taxpayers with three types of data: a) Declared by themselves (data^{c}); b) Imputed by others that have a direct relationship, data^{g}, (e.g.: crossing data of buyers and sellers in VAT), c) Risk of the declarant calculated with indirect data^{d} provided by others freely, such as those published in the Internet.

We should consider two aspects:

a) The limits of unauthorized connection of data in graphs. The data^{c} that I declare are at a distance 0 from me. Data^{g} that a Bank provides about me, are situated at a distance 1. It is not clear that data obtained at a distance "n" can be used to include me in a "group of risk" that discriminates against me. In this case, the debate is about the limits to connect edges in a graph without considering neither limits nor

authorizations. In other terms. Can a taxpayer suffer the consequence of being included in a set of taxpayers *that at least* in one model and at least for one set of data and *at least for one measure of distance* minimizes a function?

b) **The essence of these formal juridic relationships**. Ziembiński in "Formal problems of jurisprudence" (1980) noted that legal relationships do not play the same role in every branch of law, but from the very beginning, tax law studies have been built around this concept (Kalinowski, 2013), which rose in significance when the Reichsabgabenordnung Act was adopted in Germany (1919). It was based on the concept of an obligatory legal relationship and concealed a large theoretical load that had generated a broad debate conducted by German scholars: A. Hensel, H. Nawiasky, O. Bühler and E. Blumenstein, and continued by Italian finance scholars, such as B. Grizotti, A.D. Giannini, and Spanish finance law scholars: F. Sainz de Bujanda and J. J. Fereiro Lapatza.

There are two big contentious issues, among many others: a) The nature of the relation (e.g.: authority, obligation, etc., b) Its structure. D.Jarach (Jarach 1982: 54-55). emphasized that tax relationships is simple and that does not cover many entities and many obligations and liabilities. Giannini (1937) introduced the idea of a tax law relationship as a complex relationship. In any case, there is also the view that tax relationships should distinguish between the legal relationship of debt and the separate legal relationship of liability (Soares Martinez, 1963: 77-809). The biggest scholarly debate is still on tax capacity (see Kalinowski, 2019) and there is an agreement on the fact that the basic tax law relationship is always a *bilateral relationship*. Traditionally, the parties to this relationship are referred to as the active party and the passive party. If we see the problem from the structural side these types of relationships are established between two nodes with an edge.

We apply, by analogy, the concept developed by Jean Tirole in "Two sides Markets" is roughly defined as markets (Rochet and Tirole, 2006), in which one or several platforms enable interactions between end-users, and try to get the two (or multiple) sides "on board" by appropriately charging each side (e.g: Airbnb). In multisided-taxation systems, several authorities enable interactions between citizens and try to get multiple sides "on board" *using the obligation imposed on some of them to charge the others*.

The obligation to declare data^{co} about others is different from the obligation to provide data about us because both have the same illocutionary power, but they have different perlocutionary power.

I can´t publish freely data (given about my relationships with others) on the Internet. My activity is limited by principles of "privacy" (are related to others) and intention (my statements have an illocutionary power that has a negative perlocutionary effect).

For these reasons, we believe Tax norms related to fiscal declarations should regulate the assemblage of ADOAs using data^{co} and data^{go}.

Spanish philosopher Gustavo Bueno wrote extensively about the fourth category in Aristotle's table: the very complex relation. He noted that Aquinas was forced to explain how, by the fact that painting something in white, appears, in fact, a relation with all past and future real and possible white things. He used the concept of "*pullulatio*".

Artificial Intelligence can be useful and will be used, but Tax Administrations must refine the concept of fiscal declaration and the form in which are conceived. If not they will be used, we repeat, using the lower form of knowledge, correlation, and we will be qualified as risky taxpayers by the dubious procedure of the "*pullulatio*".

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