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## EUROPEAN PRIVATE INTERNATIONAL LAW AND NATIONAL CIVIL CODES: INTERACTIONS AND SYNERGIES

**Martín Jesús Urrea Salazar** 

Rey Juan Carlos University, Madrid, Spain

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### ABSTRACT

The objective of this work is to emphasize the role of global law in the current legal reality and the importance of autonomy of the will in regulating international legal relationships. The study starts from the existence of a legally fragmented world and the differentiation of three levels of regulation of legal relationships with a foreign element. One block of universal regulation, consisting of international treaties and rules of uniform law, another regional level based on the existence of regional integration organizations with their own regulations, and finally a diminishing state level, formed by national legal systems. Whether in a phase of globalization or post-globalization, the juridical reality of international trade and legal relations, in general, undergo significant changes that are worth analyzing. The perspective of global law allows us to contemplate this juridical reality from an eminently practical standpoint, which places the autonomy of will as the protagonist of the legal framework for international contracting, and points to an increasingly significant role in the field of personal and family legal relations.

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## 1. INTRODUCTION

The explicit connection between Private International Law (PIL) and national civil codes proposed in this work requires, first of all, to focus on its subject and explain the reason for the chosen title. Why European Private International Law and civil codes, and where do the interactions and synergies lie? Well, we find rules of Private International Law in all legal systems, and these can have either a national or international origin.

In the case of Spain, the sources of PIL are of two types: a) on one hand, rules elaborated by the Spanish legislator following the mechanisms provided in its legal system (referred to as domestic PIL); and b) on the other hand, rules contained in Treaties and International Conventions signed by Spain (conventional PIL rules) [2].

Furthermore, Spain, like the other 27 Member States, is part of an International Integration Organization, the European Union (EU). Therefore, European Union Law is not "foreign law" in any of the States that make up the Union. When a Spanish judge applies EU Law, they are applying the law in force in and for Spain. The CJEU, in the famous *Costa v. ENEL* judgment of July 15, 1964, expressly refers to the fact that "EU law is integrated into the legal system of the Member States."<sup>1</sup>

Consequently, the legal system of the Member States is now composed of two legal frameworks: the national legal system and the legal system of the European Union. Moreover, due to article 93 of the Spanish Constitution, matters regulated by rules derived from the European Union have become the competence of EU Law. In these matters, the European Union legislates with complete freedom, so that in case of a normative collision between this law and one elaborated by the national legislator, EU law prevails. Therefore, EU Law enjoys primacy over the national production law, as clearly defined by the case law of the Court of Justice of the European Union.

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<sup>1</sup> Indeed, the Court of Justice of the European Union defined from the beginning of the integration process the features and nature of the Community legal system. Notable in this regard are the judgments rendered in the cases *Van Gend en Loos/Administratie der Belastingen*, case 26/62 (Judgment of 5th February 1963), and *Costa/Enel*, case 6/64 (Judgment of the CJEU of 15th July 1964). The following are characteristics of this legal system: a) it is a set of international rules whose recipients are both the Member States and their nationals; b) this legal system consists of rules of primary or original law and rules of secondary or derivative law; c) by virtue of the "principle of primacy," it prevails over national jurisdictions; d) it is an autonomous legal system with respect to the domestic law of the Member States and also independent from international law (Urrea Salazar, 2021).

One might wonder where the Spanish Civil Code and the civil codes of the other Member States fit into this framework. This is because, in many instances, I would say the majority, and it is the case in Spain, domestic Private International Law rules are contained within the civil code<sup>2</sup>. For example, which national law will apply to determine filiation or to determine the legal capacity of a person. In Spain, article 9.1 of the Civil Code expressly states that "The personal law corresponding to natural persons is determined by their nationality. And that law governs capacity."

In German Law, these rules are mainly found in articles 3 to 46 of the BGB (German Civil Code), and in French Law, in articles 311-14 to 370-12 of the code civil. In the case of Peru, excluding the rules contained in Treaties and Conventions, these rules are regulated in articles 2046 to 2111 of Book X of the civil code.

On the other hand, the civil code will be applicable to the merits of the case by reference of the conflict rule itself. Indeed, the legal consequence of the conflict rule is the determination of an applicable state law. And it is possible that within that state law, the civil code may be applicable.

## **2. THE ROLE OF PRIVATE INTERNATIONAL LAW IN REGULATING LEGAL RELATIONS IN THE POST-GLOBALIZATION ERA**

Therefore, the subject at hand equally demands an analysis of the role of Private International Law in the international legal context, as a means to overcome the dilemma of international exchange [6] [7]. Notably, the birth of this discipline during the late Middle Ages, by the jurist of the Bolognese School, Francesco di Accursio (1182-1263), is linked to the activities of merchants and the existence of a global market. The rule *Statutum non ligat nisi subditos*, devised by the jurist, is believed to mark the birth of PIL. The crossing of borders should not entail a change in the applicable law to facilitate international trade. That is the essence of the maxim, which rested on the application of the law of the country of origin of the person, and today, we could translate it into the need to ensure the continuity of legal relations in space. This continues to be the role of Private International Law in the present day – to overcome the

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<sup>2</sup> Indeed, after a long and complex codification process in Spain, motivated by its regional peculiarities, the Civil Code of 1889 came into existence, almost a hundred years after its inspiring model, the French Civil Code, and following several unsuccessful attempts at codification. Regarding the provisions of Private International Law, its Articles 8 to 11 contained outdated regulations that were distant from European trends in the field. These provisions reproduced the statutory scheme with some influence from the Piedmontese Code of 1865, promulgated in Italy during the reign of Victor Emmanuel II. The reform of the preliminary title of the Spanish Civil Code in 1974 brought a significant improvement to the regulation of conflict of laws. This regulation, adapted to the specificity of European Union law, and largely replaced by European Regulations, still endures to the present day [4].

dilemma of international exchange, guaranteeing the continuity of legal relations in a legally fragmented world.

In exchange relations between parties, from a game theory perspective, the option to breach a contract is more efficient in the Pareto sense. The State, through Law and the Judiciary, provides the necessary legal certainty to the parties, ensuring that in case of a potential breach, the aggrieved party is duly satisfied, thereby counterbalancing the greater efficiency of the breaching option.

However, in the realm of international trade, the situation becomes even more complex due to the diversity of national legislations and judicial systems worldwide. Overcoming the dilemma of international exchange, therefore, requires the contribution of PIL rules. The rules of international civil procedure and those concerning applicable law provide the necessary legal certainty in international trade. The rules of international jurisdiction allow parties to determine before which judicial authorities they can bring their claims, while conflict of laws rules determine which rules of substantive law will apply to resolve the dispute. Both sectors are complemented by the realm of recognition and enforcement, which prevents court decisions from becoming ineffective in states different from the one where they were issued. The underlying idea here is that the atypical nature of contracts in international trade is sought after by the very operators who opt for self-regulation [10].

Indeed, in international trade, we encounter a series of contracts, such as leasing, factoring, or forfaiting, characterized by their atypical nature. They are either not regulated or only minimally regulated in national laws.

And it is a characteristic of international trade the limited regulation of private contractual activity, with the exception of international sales of goods, given that it is one of the most common transactions in the international commercial sphere and is governed by an international instrument of uniform law, the United Nations Convention on Contracts for the International Sale of Goods (April 11, 1980, in force since January 1, 1988) [2], [3] [1]. We can assert that the remaining contracts are sparsely regulated, and in a heterogeneous manner, in domestic legal systems.

In the European Union, taking the example of international franchise agreements, a deficient penetration of international franchises has been observed, resulting in a loss of commercial opportunities.

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It has been mentioned by European institutions themselves that the lack of regulatory framework may be at the core of the problem.

Despite this, contracts are not entirely devoid of regulation; rather, they are subject to the general contract regulations contained in each national law (whether commercial or civil law).

We can assert, then, that the atypical nature is an intrinsic characteristic of international contracts. However, these are not "novel" contracts newly articulated by merchants. Leasing, lease-back, or franchising, among others, have been in circulation since the late 19th century in the United States, from where they spread to the Old Continent through the phenomenon known as the "Americanization of commercial law," referring to how American commercial practice became the driving force behind the creation of legal-commercial institutions in the Old Continent [8].

We might ask, then, why state, regional, or international legislators have not addressed their material regulation. This is perhaps a speculative reflection that I venture to propose: it has not been regulated because it would not benefit international commercial traffic in any way. Operators in trade do not long for detailed regulation of international contracts. They precisely seek "self-regulation" as the optimal solution. Therefore, what they seek is to incorporate the "rules of the game" within the realm of autonomy of the will. When discussing autonomy of the will in international trade, we must distinguish between conflictual autonomy and material autonomy. The former allows for choosing the applicable state law to the contract ("no contract without law"), while the latter allows for incorporating the material regulation of the contract.

It is precisely this tendency towards self-regulation as the optimal solution in international trade that places us in the realm of global law. This brings us to the second basic idea: the preeminence of Global Law in a globalized, or perhaps already "post-globalized," world. What matters, from this perspective, is not the origin of the norms, i.e., whether they come from the State, institutions of an international organization, or the parties themselves, but their application to specific cases and their ability to regulate particular legal relationships. In this sense, a legal norm contained in a law can be just as valuable as a covenant or commitment recorded in a contract. This is true even though the consequences of their non-compliance may differ in one or the other case (ranging from the nullity or voidability of a contract to the application of a penalty). With this approach, the extraordinary value attributed to autonomy of the will in international trade becomes easily understandable.

We can, therefore, affirm that in the globalization of law, what matters are the processes of transmission, circulation, and penetration of norms into legal systems. This places the issue on a methodological level, rather than focusing on the existence of a unified or uniform law or the pursuit of a set of common principles for legal systems. We could conclude, then, that in the current reality, the foundations of legal life transcend States, which is also manifested in a loss of control in the creation of law [10]. In this sense, a group of authors defends the central role of judges in this "new" global legal reality, turning them into enforcers of internationalization, as they do not see the law as the primary mechanism for social regulation. They reject that the articulation of norms occurs in terms of hierarchy, in favor of a heterogeneous normative space.

In any case, this approach is not contradictory to the success achieved by the Vienna Convention of 1980 on Contracts for the International Sale of Goods, which is considered a paradigm of uniform regulation of international contracts. Indeed, the broad scope of the text (with 95 State parties currently) and the frequency of this type of operation in international trade contrast with its discretionary nature. Under its article 6, the parties may exclude the application of the Convention or any of its provisions, or even modify its effects. Even if the Convention is applicable, as the litigious situation falls within its scope, there may be no applicable rules in the Convention, and it may be necessary to resort to a national law.

Nevertheless, and this is the third basic idea, in the current state of law, the regulatory intervention of the State cannot be dispensed with. Whether due to the absence of uniform rules regulating international trade or the presence of gaps, even in self-regulation, it becomes necessary to identify the contract under a specific national law. This task falls under Private International Law. Furthermore, it will be necessary to determine the authority responsible for resolving any disputes arising from the contract and, ultimately, to ensure the extraterritorial validity of the judicial decision. That is, it will be necessary to enforce the Judgment obtained in Spain, for example, in Italy or France if the condemned party has assets there. The existence of a legally fragmented world, with a plurality of judicial bodies, serves as one of the foundations of this branch of law.

These are the three classical areas of Private International Law: international jurisdiction, applicable law, and recognition and enforcement of judicial decisions. And the European legislator has chosen the path of unification of Private International Law.

### **3. THE REGULATION OF INTERNATIONAL PRIVATE SITUATIONS**

As we have indicated, international private situations require specific regulation, and Private International Law provides solutions to the regulatory challenges of such situations through three techniques [5] [6] [7]:

A) Indirect regulation techniques: These are conflict of laws rules, as mentioned earlier. Within Spain and the European Union, we have a series of European Regulations that enjoy primacy and contain uniform Private International Law rules. Perhaps the most prominent is Regulation 593/2008 known as Rome I, which governs conflict of laws in contractual obligations. We also have Regulation 864/2007 of July 11, 2007, concerning the law applicable to non-contractual obligations, known as Rome II. Similarly, Regulation 650/2012 on succession contains conflict of law rules in this area, as does the 2007 Hague Protocol on maintenance obligations, referred to in Article 15 of Regulation 4/2009.

B) Direct regulation techniques: As a second technique, these involve what is known as special substantive rules. These are rules that govern the substance of the matter. Such rules exist in all legal systems but are in the minority compared to conflictual techniques. These special substantive rules can be:

- "Independent," applying irrespective of the conflict of laws rule and the governing law of the country. For instance, Article 29.1 of the Spanish Historical Heritage Law states that: "The movable assets forming part of the Spanish Historical Heritage that are exported without the required authorization under Article 5 of this Law belong to the State. These assets are inalienable and imprescriptible." The rule governs an international private situation and does not refer to the law of any specific country.

- "Dependent," applying only when the conflict of laws rule of the country whose courts are hearing the case leads to the application of the law of the State where the rule is in force. For example, in certain cases, the 1980 Vienna Convention on the International Sale of Goods, which, according to Article 1.1 letter b), applies within its material scope when the relevant conflict of laws rule designates the law of a State where the Convention is in force.

- "Special substantive rules with spatial indicators", applicable only in certain cases connected to the country whose courts are hearing the case. For example, the 1988 Ottawa Convention on International Financial Leasing, which, under Article 3, requires the lessor and the lessee to have their place of business in different States.

C) The third technique of Private International Law regulation is known as intermediate. This involves extension rules, which extend the application of certain domestic substantive laws to certain international private situations. An example of this type of rule is Article 9.6 II of the Spanish Civil Code, which indicates that the law applicable to the protection of adults will be determined by the law of their habitual residence, but "Spanish law will apply to the adoption of provisional or urgent protection measures."

And what is the usual situation? The coexistence of methods with a predominance of the conflictual-multilateral method. This is the case in most countries, including within the European Union, where the majority approach taken by the European legislator is to regulate through conflict of laws rules.

#### 4. PROOF OF FOREIGN LAW

One last issue related to the subject at hand is the proof of foreign law. This matter is not regulated in European Law and is left to the discretion of individual States. Perhaps because it is linked to the issue of national sovereignty or as an "extension" of the rule *lex fori regit processum*, which governs procedural acts in all legal systems. In Spain, this rule is formulated in Article 3 of the Civil Procedure Law (LEC), stating:

*"With the sole exceptions that may be provided by Treaties and International Conventions, civil proceedings conducted in the national territory shall be governed solely by Spanish procedural rules."*

Regardless of the reasons, the regulation of the three basic questions concerning the application of foreign law, namely the need for allegation, the need to prove the content and other aspects relating to foreign law, including the legal framework for such proof and solutions when foreign law is not proven in the process, can be found in Spain in Articles 288 of the Treaty on the Functioning of the European Union (TFEU), 12.6 of the Civil Code, 281.2 of the LEC, and 33 of the Law on International Judicial Cooperation in Civil Matters (LCJIMC).

Articles 288 TFEU and 12.6 of the Civil Code refer to the binding nature of European and Spanish conflict of laws rules. This means that parties cannot disregard what these rules stipulate<sup>3</sup>.

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<sup>3</sup> Indeed, Article 12.6 of the current Civil Code states that "Courts and authorities shall apply Spanish conflict of law rules *ex officio*." With less clarity but easily extrapolated to the level of European Private International Law, Article 288 of the TFEU establishes that "To exercise Union competences, the institutions shall adopt regulations, directives, decisions,



However, the essential regulation of the proof lies in Article 281.2 of the LEC, which deals with general proof in civil proceedings and addresses the need to prove foreign law and the possibility of the court's involvement in such proof. According to paragraph 2 of the aforementioned article:

*"Customs and foreign law shall also be subject to proof. Proof of custom shall not be necessary if the parties agree on its existence and content, and its rules do not affect public order. Foreign law must be proven with regard to its content and validity, and the court may use any means of investigation it deems necessary for its application."*

On the other hand, Article 33 of the LCJIMC refers to the probative value of evidence provided to establish the content and validity of foreign law, the solution to be followed if the parties are unable to prove foreign law, and the legal framework for the so-called "information on foreign law." The text of the article, titled "Proof of foreign law," is as follows:

*1. The proof of the content and validity of foreign law shall be subject to the rules of the Civil Procedure Law and other applicable provisions.*

*2. Spanish courts shall determine the probative value of the evidence provided to establish the content and validity of foreign law in accordance with the rules of sound judgment.*

*3. In exceptional cases where the parties have been unable to establish the content and validity of foreign law, Spanish law may be applied.*

*4. No report or opinion, national or international, on foreign law shall be binding on Spanish courts.*

The introduction of Article 33 in Law 29/2015 on international judicial cooperation was considered by some of the doctrine as a step forward in overcoming the optional regime that had been operating in the Spanish conflictual system, according to the jurisprudence of the Supreme Court. This means that the applicable law to any international private situation would be Spanish law, except when two circumstances coincide: a) a conflict of law rule designates foreign law as applicable, and b) one of the parties proves its

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recommendations, and opinions" and that "Regulations shall have general application. They shall be binding in their entirety and directly applicable in all Member States." And since the EU's normative action in Private International Law has been predominantly carried out, by the will of the European legislator, through Regulations, European conflict of law rules enjoy the same mandatory character and prevail over the internal conflict of law rules of the Member States.

content and validity. However, the ambiguity of the norm conditions the subsidiary application of Spanish law to the impossibility of proving the "content and validity of foreign law" by the parties<sup>4</sup>.

In summary, the combination of these three provisions leads to the following legal framework:

- Although Article 281.2 of the LEC refers to the proof of facts, foreign law is not a procedural fact but a substantive law and, therefore, is subject to different rules. Consequently, Article 399 of the LEC does not obligate the parties to allege foreign law. Foreign law applies because the European or Spanish conflict of laws rule determines so.

- However, foreign law must be proven. Article 281.2 expressly provides for this requirement, and it falls upon the parties to do so. The principle *iura novit curia* does not apply to the law of other states. The national judge must know their own law but not that of other countries. The general rule is that whenever foreign law must be applied, it must be proven in the specific case. However, this general rule has two exceptions: a) the first is when the court already has accurate knowledge of it, in which case it must be established on record; and b) the second is when a party invokes foreign law not as the *ratio decidendi* to be applied to the merits of the case but as mere support *ad adjuvandum* of their claims or as a legal example.

- Foreign law can be proven at first instance, on appeal, and in cassation. However, as the Supreme Court has stated, for foreign law to be admissible on appeal or cassation, it must have been introduced at the appropriate procedural time, i.e., with the claim and/or in the response to the claim.

- Foreign law comprises all legal norms that apply to the specific case and must be exhaustively proven.

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<sup>4</sup> *Vid.* Garcimartín Alférez, F. J., *op. cit.* in footnote 10, who proposes a solution for forensic practice based on a system of presumptions. Thus, if the plaintiff has been unable to prove the foreign law, their mere assertion will suffice, and they will base their claim on Spanish law. It will then be the defendant's responsibility to demonstrate that the plaintiff had means to prove the foreign law. If the defendant remains silent and responds to the claim based on Spanish law, the doctrine of admitted facts will apply, and the judge will apply Spanish law. If the defendant proves that the plaintiff had means to prove the foreign law referred to in the conflict of law rule, the judge will dismiss the claim or decide in accordance with the foreign law proven by the defendant in their response. If the defendant fails to demonstrate that the plaintiff could have proven the foreign law, the judge will rule applying Spanish law. It is easily understandable how challenging this form of proof can be.

- While the parties are responsible for proving foreign law, the court may intervene: a) optionally, to complete the evidence already provided by the parties, or b) mandatorily, if the parties have tried but failed to provide such evidence.

- What happens in the absence of proof of foreign law? There are three hypotheses accepted by doctrine and jurisprudence: a) the first is the automatic application of the conflict of law rule, resulting in the court proving foreign law and allocating the costs to the party that was supposed to prove it; b) the second possibility is the application of Spanish substantive law; and c) the third is the dismissal of the claim. Of these three options, only the last two are constitutionally admissible, with the dismissal of the claim being the most correct and doctrinally sound option.

The Supreme Court and part of the doctrine, however, have leaned towards providing a substantive response based on Spanish substantive law.

## 5. CONCLUSIONS

It is not far-fetched to state that the current phase of globalization or interconnection demands a global response from a legal perspective. The treatment of law must adapt to legal relationships that are increasingly interconnected with various legal systems. Overcoming the dilemma of international exchange through rules of private international law, including uniform rules within the European legal space, is a useful solution that must be combined with material regulations of uniform law and an increasing intervention in the field of personal and family relationships.

In this context, the autonomy of the will is called upon to play an increasingly significant role. While it has found ample space in the realm of international trade, supported by the will of self-regulation by operators, the legal reality is also demonstrating its growing relevance in family relationships.

Indeed, in the field of family relationships, the ancestral tension between autonomy of the will and public order is much more evident than in the patrimonial domain. This has not prevented, in recent years and based on international treaties on human rights, its gradual expansion, as demonstrated by European Regulations in private international law governing family relationships (Article 5 of Regulation 1259/2010 on the applicable law to divorce and legal separation, and Articles 22 of Regulations 2016/1103 and 2016/1104 on matrimonial property regimes and the property effects of registered partnerships),

international codification (Articles 7 and 8 of the Hague Protocol on the Law Applicable to Maintenance Obligations of 2007), and autonomous private international law of some States.

In conclusion, this "self-regulating" role assumed by the autonomy of the will is directly connected to the concept of Global Law. It is a perspective that can be supported by a methodological foundation and that affects the role of the State as the protagonist in creating legal norms. Focusing not so much on the origin of norms as on their application to specific cases, their ability to regulate specific legal relationships, is to adopt a realistic, appropriate, and suitable perspective for regulating private international situations, which are becoming increasingly prevalent in the current reality. The problems that may arise from such regulation will continue to be addressed by private international law, using its techniques and traditional fields of study in most cases.

## REFERENCES

- [1] Audit, B. (1990). *La vente internationale de marchandises. Convention des Nations-Unies du 11 avril 1980*. Paris, L.G.D.J.
- [2] Calvo Caravaca A.-L, Carrascosa González, J. (2018) *Derecho internacional privado, vol- I*.
- [3] Castellanos Ruiz, E. (2011) "La Convención de Viena de 1980 sobre compraventa internacional de mercaderías: ámbito de aplicación, carácter dispositivo y disposiciones generales". *Cuadernos de la Maestría en Derecho*, (1), 77-161.
- [4] Fernández Rozas, J.C. (1995) "Capítulo IV: Normas de Derecho internacional privado". *Comentarios al Código civil y Compilaciones forales*, 2, Jaén, Edersa.
- [5] Fernández Rozas, J.C, Sánchez Lorenzo, S. (2011) *Derecho internacional privado*, 12ª edición.
- [6] Garcimartín Alférez, F. (2001) "La racionalidad económica del derecho internacional privado", *Cursos de derecho internacional y relaciones internacionales de Vitoria-Gasteiz*, (1), 2001.
- [7] Garcimartín Alférez, F.J. (2001). *Derecho internacional privado*, 6º edición. Thomson Reuters.
- [8] Leyva Saavedra, J. (2013) "El contrato de Lease Back", *Revista de Derecho y Ciencia Política - UNMSM.*,70 (2), 132-133.
- [9] Ponthoreau, Marie-Claire (2006) «Trois interprétations de la globalisation juridique Approche critique des mutations du droit public», *l'Actualité juridique. Droit administratif*, nº1.
- [10] Urrea Salazar, M.J. (2021). *Instituciones y Derecho de la Unión Europea. General Concepts*. Ed. Síndéresis.

## ABOUT THE AUTHOR

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### **Martín Jesús Urrea Salazar**

Doctor in Law (LL.D.) from Rey Juan Carlos University following a Bachelor's degree from Complutense University of Madrid. Lawyer. Professor of Private International Law at the University Studies Center CEDEU (Madrid). Member of the Board of the Institute of International Legal Studies, Rey Juan Carlos University, Madrid, Spain.

e-mail: [martinjesus.urrea@gmail.com](mailto:martinjesus.urrea@gmail.com)

ORCID ID: <https://orcid.org/0000-0003-2301-2947>

Web of Science Researcher ID:

<https://www.webofscience.com/wos/author/record/HZJ-5802-2023>

Google Scholar ID: [Martín Jesús Urrea Salazar - Google Académico](#)

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