Arqueología y *Téchne*

Métodos formales, nuevos enfoques

Archaeology and *Techne*

Formal methods, new approaches

Editado por

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Arqueología y Téchne

José Remesal Rodríguez

Sigo el criterio defendido por M.I. Rostovzeff:

For me archaeology is not a source of illustrations for written texts, but an independent source of historical information, no less valuable and important, sometimes more important, than the written sources. We must learn and we are gradually learning how to write history with the help of archaeology[1].

Para el estudio de la economía antigua es necesario prestar particular a tención a los datos arqueológicos y epigráficos, mucho más abundantes y explícitos que las fuentes literarias. A través de estos estudios podemos profundizar en nuestros conocimientos de la vida social, administrativa y política del mundo antiguo, en nuestro caso de estudio el imperio romano.

En los últimos años se han desarrollados una serie de técnicas de análisis, nacidas en otros ámbitos, aplicadas a los materiales arqueológicos, desde dataciones radio carbónicas a análisis faunísticos, pasando por la multiforme actividad desarrollada por la arqueometría aplicada al estudio de la cerámica y más recientes a técnicas aplicadas a análisis del territorio como los programas GIS o LIDER. Pero en la mayoría de los casos se ha tratado de lo que podríamos llamar una "prestación de servicios". El investigador en otras ciencias ha realizado un informe que ha sido utilizado e interpretado por el arqueólogo sin que se haya producido un trasvase de conocimientos entre ellos. Cada uno ha permanecido en su rincón. Ciertamente en los últimos años se ha avanzado en el ámbito de la multidisciplineidad, pero, como señalan L. Pignano, I. Morer Zapata, A. Díaz-Guilera en su artículo es preciso dar el paso a la llamada transdisciplinariedad, en la que se formen investigadores con conocimientos en las nuevas aplicaciones de ciencias de la complejidad al mismo tiempo que en disciplinas de carácter histórico.

En nuestro proyecto hemos pretendido alcanzar algún grado de transdisciplinariedad vinculando a los estudios históricos las modernas ciencias de computarización y estudios de redes. No es tarea fácil y exigirá una nueva perspectiva en la organización de nuestros sistemas públicos de financiación y de reconocimiento de esta transdisciplinariedad, de modo que sean reconocidos y estimulados los investigadores con este doble perfil de formación, en ciencias históricas y en ciencias computacionales, que hoy día son vistos como "ajenos" en uno y otro campo.

Me complace comprobar que gran parte de los jóvenes firmantes del manifiesto en favor de esta transdisciplinariedad, han participado o colaborado con nuestro proyecto EPnet[2] . Sin embargo, he de insistir en la necesidad de saber distinguir entre "*téchne*" y "*nous*". Técnica y pensamiento. El historiador debe basarse en datos, pero no es sólo un recolector de datos, debe saber interpretarlos. Los documentos no plantean preguntas, es el historiador quien las plantea. La calidad de nuestras preguntas depende de la comprensión global que tenemos de la sociedad que analizamos. Nuestra comprensión depende del análisis depurado de los datos a nuestra disposición. Las nuevas técnicas analíticas, basadas en ciencias de la computación y de análisis complejos, no sólo facilitan la acumulación de datos, sino, sobre todo, la posibilidad de contrastar nuestros análisis deductivos tradicionales con los resultados

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[1] Rostovtzeff 1922, VIII.
[2] Brughmans et al. 2019.

obtenidos mediante la utilización de estas nuevas técnicas y métodos formales, que a su vez abren nuevas perspectivas de análisis[3].

El proyecto Producción y comercio de alimentos durante el imperio romano. Dinámicas económicas y políticas (Production and distribution of food during the Roman Empire: Economics and political dynamics) EPnet. (ERC grant agreement nº ERC-ADG340828) pretendía, mediante la aplicación de métodos formales, comprobar o desechar las diversas teorías, basadas en análisis deductivos, que habían sido expuestas sobre la vida económica del mundo romano, véase el artículo de X. Giménez Baqués, A. Mosca, B. Rondelli and G, Rull Fort, que sintetiza nuestro proyecto.

Partíamos del estudio de un elemento clave en cualquier cultura: la organización del sistema de abastecimiento de alimentos, hecho particularmente relevante en el Imperio Romano, dado que el emperador debía asegurar el abastecimiento de la capital, Roma, y de su ejército, disperso en las amplias fronteras del imperio. Para ello, en el CEIPAC (Centro para el Estudio de la Interdependencia Provincial en la Antigüedad Clásica) habíamos constituido una base de datos, basada en un sistema relacional (ceipac.ub.edu), en la que recogemos la información sobre la distribución de las ánforas en las que se envasaron productos alimentarios y su epigrafía. En la actualidad disponemos de más de 54.000 registros que suponen más de un millón de datos. EPnet ha permitido migrar esta base de datos a un sistema ontológico (romanopendata.eu), lo que no sólo amplía nuestra posibilidad de análisis, sino, sobre todo, la posibilidad de interrelacionar nuestra base de datos con otras que recogen información sobre otros múltiples aspectos y documentos relacionados con la vida económica del imperio romano. En la actualidad estamos integrados en el proyecto ARIADNEplus (https://ariadne-infrastructure.eu), que tiene como finalidad realizar la integración entre numerosas bases de datos, que permitirá un desarrollo exponencial de las posibilidades de investigar sobre nuestros temas.

El volumen de documentos recogidos en nuestro proyecto permite, por primera vez, disponer de gran cantidad de datos seriales y en el caso del estudio del aceite bético no sólo de disponer de datos seriales, sino también de datos con cronología absoluta, caso único en el mundo antiguo, en el que la falta de documentos es considerada la cuestión más problemática.

Por lo que respecta a las cuestiones generales planteadas en nuestro proyecto, al menos, sobre dos cuestiones podemos ofrecer una respuesta novedosa: La economía romana puede definirse como una economía abierta, en la que la gran cantidad de actores la aproximan a lo que hoy definimos como una economía moderna. Por otra parte, hemos puesto de manifiesto la influencia del estado que, al necesitar que una serie de productos fuesen transportados para abastecer al ejército y a Roma, permitió el desarrollo de un verdadero comercio de productos desconocidos en otras regiones a miles de kilómetros de su lugar de producción.

Se venía defendiendo que la ruta para abastecer a *Germania* y *Britannia* era la vía del Ródano. Nuestros trabajos han demostrado que la vía para el abastecimiento de *Germania* y *Britannia* era la ruta atlántica, lo cual no significa minusvalorar la vía del Ródano, sino marcar las diferencias entre una y otra vía y sobre los posibles agentes que intervinieron en una u otra.

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[3] Sobre ello, proponemos una bibliografía esencial: Ahnert et al. 2021; Bentley, Maschner 2003; Brughmans, Wilson, in press; Caro et al. 2020; Champion 2021; Daems 2021; Djindjian, Moscati 2021; Donnellan 2020; Fenn, Römer-Strehl 2013; Graham 2006; Kathryn 2020; Knappett 2013; Peeples 2020; Velázquez Soriano, Espinosa Espinosa 2021; Verboven 2020; Verhagen et al. 2019.

Pero el proyecto EPnet ha tenido multitud de otros resultados que el lector podrá ver en los artículos aquí recogidos y en la amplia bibliografía generada por el proyecto, recogida en este volumen. Pero, sobre todo, EPnet ha puesto de manifiesto la necesidad de la transdisciplinariedad de la que hablábamos al inicio.

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