Social kinds: historical and multi-functional

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Abstract

The notion of multi-functional kind is introduced to explain how social scientists may be able to draw inferences across historically unrelated societies or cultures. Multi-functional kinds are neither eternal nor purely historical, support non-trivial inductive generalisations, and allow to overcome scepticism about the inductive potential of multiply realised (functional) properties. Two examples, from monetary economics and anthropology, provide support for a pluralistic ontology of the social world.

Keywords Social kinds · Real kinds · Historical kinds · Property clusters · Functional kinds · Institutions

1 Introduction

The idea that social science can generate knowledge of a general kind has always been controversial. Although the opposition has taken several forms, it has usually exploited a set of common observations: that social reality is complex, varied, and in constant flux; that patterns observed in a given period and geographical location tend to break down in other domains; and that human behaviour is dependent on people's changing conceptions of their own actions, relations, and institutions (e.g. Scriven, 1956; MacIntyre, 1981; Taylor, 1985; Hacking, 2004). Perhaps our ambitions should be adjusted accordingly: the knowledge that we can plausibly gather in social science is bound to be mostly historical and local in character (e.g. Foucault, 1976; Rosenberg, 2009).

In an influential paper, Millikan (1999) has provided ontological foundations for this perspective, introducing a distinction between *eternal* and *historical kinds*. While

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'the ontological ground for induction' in the case of eternal kinds 'lies in the intrinsic natures of the members of the kind', the members of historical kinds 'are like one another because of certain historical relations they bear to one another' (1999: 50, 54). Correlations between properties in the so-called 'special sciences', in particular, are usually explained by the fact that the members of a lineage (or kind) share a common origin.

Eternal and historical kinds, arguably, do not exhaust the space of possibilities. Some epistemically useful kinds studied by the special sciences – functional kinds in biology and social science, for example – consist of properties that have emerged independently in different spatio-temporal locations but are not 'held together' by eternal laws. The challenge is to explain how this is possible: What sort of mechanisms might underlie the existence of non-eternal kinds that support non-trivial inductive generalisations across different lineages?

The answer to this question has important implications. The explanatory role of analogical functional traits (such as *eye*, *wing*, or *memory*) has been widely discussed in the philosophy of the biological and cognitive sciences.[1] In contrast, the debate in the philosophy of social science has been limited so far. But attempts to theorize about kinds like *monarchy*, *marriage*, or *slavery* – institutions that seem to have emerged independently in different societies – would be epistemically suspect without a plausible account of their supposedly shared properties. Given that such institutions have a history, one can study how their particular instantiations (the British monarchy, Catholic marriage, or Roman slavery) have evolved through time. But why should one believe that generalisations about monarchies or slave-economies hold across historically unrelated societies?

The main goal of this paper is to answer this question. I will start from the consideration that social scientists do formulate general theories. If such a project has any chance to succeed – that is, if some general theoretical knowledge can be achieved in these disciplines – then it must be supported by the existence of a-historical or trans-historical kinds. A solution is offered by the observation that many social kinds are *multi-functional*, and that interactions between different functions have similar consequences across different lineages.

Monarchs, for example, tend to fulfil ritual and religious functions, but also play the political role of mediating between local groups; they collect taxes and provide public goods; they assume leadership in times of war, make laws and monitor their application. Such functions tend to 'cluster' around a single institutional role for a reason: the way in which each of the functions is fulfilled interacts with the fulfilment of other functions that are related to it. So it is not by chance that monarchies tend to share certain common properties.

Without claiming exclusivity (there may be other kinds of social kinds) I will argue that multi-functional kinds can provide ontological foundations for at least some of the (imperfect, fallible) inferences that social scientists try to make across different epochs and cultures. The paper is organised as follows: the next section briefly recalls how the concept of historical kind emerged in the contemporary debate about real kinds. Section 3 illustrates an argument that is often used to cast doubt on

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[1] See e.g. the essays in Buller (1999), as well as Weiskopf (2011), Polger and Shapiro (2016).

the inductive potential of social categories, based on the notion of multiple realisation. The idea of multi-functional kind is introduced in Sect. 4, backed up by two examples from economics (Gresham's law) and anthropology (matrilineal kinship). Section 5 addresses an objection: aren't the generalisations that social scientists make across lineages supported by a single historical kind (*homo sapiens*)? I will argue that membership in the same species is only an indirect cause of the phenomena that social scientists are interested in, and that the explanatory questions asked by the latter require a different answer. Section 6 summarises and concludes the paper.

2 Historical kinds

Recent debates on real kinds in the philosophy of science have been dominated by an 'inferentialist' perspective. Real kinds,[2] according to this approach, are real-world structures that make successful scientific predictions, explanations, and interventions possible. A currently popular view conceives of kinds as clusters of properties that, in virtue of their correlations, support a variety of inductive inferences (they are 'highly projectible', to use Nelson Goodman's famous expression). The job of science is twofold, according to this view: on the one hand, scientists aim at discovering robust correlations that can be relied upon for predictive purposes. On the other, they seek to identify the causal mechanisms that are responsible for these correlations, both for explanatory purposes and for intervention. I will refer to the theories that share this perspective as *Causal Property Cluster* or *CPC theories* of real kinds (e.g. Boyd, 1991, 1999; Kornblith, 1993; Craver, 2009; Khalidi, 2013; Ereshefsky & Reydon, 2015, Millikan, 2017).

CPC theories are generally non-committal about the mechanisms that keep real kinds together – it is the job of science, after all, to find out what they are and how they work. In an influential essay, Millikan (1999) has proposed a simple distinction between two types of mechanisms that may explain property clusters. In some cases – which are especially abundant in physics and chemistry – the clusters are set by 'eternal' laws with a supposedly unrestricted domain of application. In others, they are created by contingent and local mechanisms. In such cases, according to Millikan, we should speak of 'historical' kinds: what explains correlations among properties is membership in a common lineage – the fact, for example, that the members of a kind have an ancestor-descendant relation or share a common progenitor.

Biological species are obvious examples of historical real kinds. But cultural artefacts and social entities, according to Millikan, are also plausible candidates.[3] Like biological traits, their properties are non-accidentally and locally clustered. Processes of serial production, copying, and imitation explain the correlations that we observe within a tradition or cultural lineage.

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[2] I will use throughout the essay the expression 'real kind' instead of the traditional expression 'natural kind', which for obvious reasons is best avoided in discussions of social kinds. 'Real kind' was first used by John Stuart Mill (1874) in a seminal analysis that is still influential today.

[3] See also Godman (2020), Khalidi (2022).

Take stirrups, for example. Stirrups are considered one of the most important technological innovations of the pre-modern period. According to a well-known hypothesis, they may have promoted the ascendancy of cavalry – and chivalry – in Medieval Europe (White, 1964).[4] Stirrups were not a European invention, to be sure. According to archaeologists, the earliest exemplars appeared in China around the fourth century A.D., and travelled eastward (to Japan) and westward (to central Asia and then Europe) during the next three centuries. Charles Martel's Frank army used them in their eighth century campaigns against the Arabs, establishing the supremacy of cavalry over footed soldiers and laying down the planks of the social order that would dominate Europe for the next six centuries.

There is no doubt that reconstructing lineages is an important task for social science. Archaeologists and historians devote significant time and effort to understand how specific artefacts – weapons, tools, vases, buildings – have spread within and across populations. As the case of stirrups exemplifies, tracing the historical lineage of these items is often an important preliminary step to reconstruct changes in social relations and political structure. But material artefacts are not the only nor the most important historical kinds: institutions, norms, conventions, fads are also reproduced and passed around in a similar way.

Consider the rules of traffic. During the middle ages, different rules were in place in different parts of Europe, with a prevalence of left driving for carriages and horses, while pedestrians walked on the right. This particular rule was in force in Paris in the eighteenth century, for instance, when the French Revolution broke out. Among many other innovations, the Revolution established the egalitarian principle that all travellers (whether on foot, carriage or horse) must use the right-hand side of the road. The rule was adopted by the French army, and was disseminated by Napoleon in continental Europe. The process of diffusion of right-hand driving was gradual, to be sure, and reached completion only in the twentieth century with the advent of cars. Except in Britain, of course, where the French army never managed to set foot (Young, 1996).

Examples like these could be multiplied at will. They convey a picture of social science as devoted mainly to the investigation of reproductive lineages. A *reproductive lineage*, as summarised by Marion Godman, requires.

1. The existence of a model;[5]
2. That new member(s) are produced in interaction with a model (or other past members);
3. That the interaction with past models (or members) causes the new members to resemble past member(s); and.
4. That steps 2–3 recur between members that are not models.

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[4] Lynn White's thesis has been widely debated by historians, giving rise to the so-called 'stirrup controversy'. For a review, see e.g. Roland (2003).

[5] 'Models', to clarify, are individual items that trigger processes of replication. Their 'descendants' become members of the kind in virtue of their genealogical relation with the model.

Jointly, these conditions create historical kinds. Historical kinds are consti-
tuted by their process of reproduction (from Godman, 2020: 47, with slight
modification).

A possible implication of this picture is that the inductive inferences that historical
kinds support do not hold outside particular lineages. Or, at least, there is no reason to
think that they should. If the diffusion of social properties is idiosyncratic and highly
path-dependent, social scientists' work will typically generate deep knowledge of
rather limited scope. Whatever inductive inferences can be made about a society at
a given point in time, they must exploit genealogically based similarities. Social sci-
ence depends on social history, according to this view, and little room (if any) is left
for social theory of a general or generalisable sort.

3 Functional kinds and multiple realisation

The implications of the historical account outlined in the previous section depend on
a key premise: that no common factor or mechanism makes different lineages con-
verge on common properties. That evolution is constrained by fundamental physical
principles – like laws of conservation or homeostasis, for example – is commonplace
among philosophers of biology. But are such constraints strong enough to promote
convergence on a set of core biological traits or social properties? Can they explain,
in particular, the projectibility of *social* kinds?

Some philosophers have offered sceptical considerations. According to a popu-
lar argument, the concepts that special scientists use are unlikely to have a broad
explanatory import because they refer to *functional* and *multiply realised* properties.
Functional properties are identified on the basis of their causal role, rather than their
intrinsic or structural characteristics. They are particularly useful whenever a causal
role is (or can be) fulfilled by different structures, processes, or mechanisms. Para-
digmatic examples include, again, biological traits (eyes, teeth, wings)[6] and social
entities (money, husbands, kings).

Eyes have the function of detecting features of the environment through the per-
ception of light, for instance. But while the eyes of mammals have a singular lens
that focuses light onto photoreceptors on the retina, insects' eyes have many optical
subunits connected directly to nerve fibres. Or consider marriage: marriage institu-
tions have the role of promoting cooperation in economic, reproductive, and affective
matters. But while some marriages are monogamous, others are polygamous; some
are permanent and other temporary; some are open and others closed; some are cho-
sen and others are arranged; some are homosexual and others are heterosexual (and
so forth). 'Being married' takes different forms in different societies – it is a property
that can be realised in multiple ways, or, to use another piece of philosophical jargon,
'supervenes' on base properties in a myriad of ways.[7]

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[6] Intended in a homoplastic, rather than homological sense.

[7] On the supervenience and multiple realisability of social properties see for example Currie (1984),
Sawyer (2002), Zahle (2007).

Functional concepts tend to be more general than structural ones (*marriage* is more general than *monogamous marriage*, for example). Generality is attained by means of abstraction, but at a cost. If their carriers have little in common, functional properties will be weakly projectible. To say that something is an eye does not give much information about other properties, besides its being a light-receptor.[8] Similarly, to say that Alex and Andrea are married does not tell us a lot about the way their relationship is organised.

The sceptical argument can be put in general form as follows: starting from some premises about functional, multiply realised properties, the argument concludes denying that social concepts refer to real kinds. In virtue of its form, we may call it the 'No Miracles Argument' against social kinds:

[NMA]

1. Social properties are functional properties;
2. Functional properties are multiply realised;
3. It would be a miracle if entities with the same multiply realised property had any other property in common;
4. Hence, it would be a miracle if there were any real social kinds.

Versions of this argument have been formulated by various philosophers, usually in the debates that concern reductionism and multiple realisation in the philosophy of mind.[9] The worry raised by NMA is not necessarily that functional properties are unreal, or that functional concepts do not pick real cause-effect relations. The worry is rather that, even if they were real, functional properties would pick *single* relations: no other properties could be inferred from the possession of such traits. As Millikan puts it:

> our question is not how a variety of different objects might come to exhibit the same functional property, but whether these objects would then form a proper natural kind over which inductions to further functional properties would be grounded. (Millikan, 1999: 59)

One worry, in the case of biology, stems from the fact that natural selection seems pretty indifferent to the materials it uses to achieve a given goal, and the physical constraints (energy conservation, homeostasis) are too permissive to justify optimism about projectibility beyond a single selected function. The worry gets even bigger when we move to the social realm, which is further removed from these fundamental constraints. Given the ubiquity of functional properties in social science, the discovery of general social patterns seems a miraculous prospect – a bet that social scientists are likely to lose. The correlations between properties observed in the social

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[8] See Couch (2005), Weiskopf (2011), but also Polger and Shapiro (2016).

[9] Kim (1992), Shapiro (2000), Papineau (2009); but see also Godman (2020) for a generalisation to historical kinds in social science.

realm are more plausibly explained historically.[10] Social explanations and theoretical models are likely to hold over limited domains, and attempts to theorize across lineages should be taken with a good deal of scepticism.

4 Multiple functions

In the rest of the paper I will try to outline a less pessimistic view that makes room for a-historical knowledge and cross-lineage generalisations in the social sciences. The view is built upon a feature of real kinds that, with one important exception, has been generally overlooked so far. As noticed by Muhammed Khalidi, interesting correlations between properties typically result from the interaction between *several* causal mechanisms:

> All objects with a mass of exactly 1 kg have few properties as a result of having *mass of 1 kg* (e.g. the property of *moving with an acceleration of* 1 m s^{-2} *when subject to a force of* 1 N). Rather, it is usually specific stable combinations of some set of (determinate) properties that have a rich set of effects, giving rise causally to the instantiation of a multitude of other properties. (Khalidi, 2018: 1389)

This observation is particularly pertinent in the case of social kinds, as we shall see shortly. The reason why some social kinds are projectible is that their members have *multiple functions*. And the interaction between these functions grounds the correlations between properties upon which general theories are built.

Since many multi-functional kinds are institutions, a few preliminary words of introduction are in order. Following an old and established tradition, I will take institutions (such as marriage, property, or money) to be systems of rules that solve problems of coordination and cooperation – by reducing uncertainty, free riding, and transaction costs (e.g. North, 1990). [11] The key point, as far as we are concerned, is that the problems that institutions solve are often *systematically* related or clustered. For example: it is not a coincidence that social organizations devoted to military defence are also usually devoted to the collection of taxes. Or that the body of norms that regulate child-rearing also regulate inter-generational transfers of resources. The clustering of functional properties reflects objective relations that hold between the functions, or between the problems that social institutions are supposed to solve.

To illustrate, I will examine a couple of paradigmatic examples taken from different areas of social science. Given the central role they play in economics and anthropology, and the amount of theorising they have fostered, *money* and *kinship* are promising candidates for the status of real kinds. They are also undoubtedly multi-

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[10] This point would be tautological if we took 'functional' in a strict etiological sense (in the sense of what have been called 'proper functions' – see e.g. Garson, 2019), so the concept is intended in a looser synchronic sense here.

[11] According to a more recent version of this view, the rules must have the further property of being incentive-compatible (or, in game-theoretic jargon, the actions they prescribe must be in equilibrium). See e.g. Greif and Kingston (2011), Guala and Hindriks (2015), Guala (2016).

functional: according to a classic definition, money is whatever performs the function of medium of exchange, store of value, and unit of accounting. Family (or, in more technical jargon, kinship) relations regulate alliances and obligations among adults, the education and socialization of children, the use of resources and the transmission of wealth across generations, among other things.[12]

As one would expect from genuine functional kinds, both kinship and money are multiply realised. Their functions can be performed in many different ways, that is, there are different currencies that are money (sometimes realised in widely different manners) and different rules that define membership and obligations in families. And yet, multiple realisation has not deterred social scientists from theorising about these kinds. On the contrary, in both cases social scientists have tried to identify patterns and relationships that hold not just within a single historical lineage, but also across lineages that do not share a common origin or cause.

4.1 Gresham's law

According to the theoretical principle known as 'Gresham's Law', if two types of money with the same nominal value happen to co-exist in the same economy, the money with less commodity value will tend to circulate more. 'Nominal', in economists' jargon, means the official or legally determined value of a currency, while its 'commodity' value is the value of the material the currency is made of. A typical mechanism that pulls nominal and commodity values apart is the debasement of metal coins: although debased coins have lost a certain amount of metal (silver, say) due to 'clipping', from a legal point of view they can be exchanged with exactly the same quantities of goods or services as 'good' coins. But since people do not like them as much, they will tend to get rid of debased coins as soon as possible. That's how, in a nutshell, bad money can drive good money out of the economy (e.g. Dutu et al., 2005).

Like all theoretical principles in economics, Gresham's Law is not supposed to be an exceptionless generalisation. It is rather a 'tendency law' with plenty of exceptions, provisos, and counterexamples.[13] And yet, it is general (it applies to all sorts of currencies) and far from trivial: untutored intuition suggests that the more valuable currency should be used *more* than its competitor, not less. But theoretical reflection overcomes the intuition. The important point, as far as we are concerned, is that Gresham's Law is a direct and counterintuitive consequence of a conflict that may occur between the first and the second function of money: in order to work effectively as a medium of exchange, a currency must be a reliable store of value. When nominal value and commodity (storage) value diverge, the bad currency tends to fulfil the

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[12] None of these lists is supposed to be exhaustive: because real kinds are inductively rich or highly projectible, new functions and relations between functions are constantly discovered by scientists.

[13] As Hayek (1962) once put it, "as a mere empirical rule it is practically valueless". The law does not hold, for example, if the balance of payments is positive (i.e. there is a net influx of currency in the economy) or if the status of legal tender (the nominal value of a currency) is uncertain.

trading function, while the good one tends to fulfil the saving function.[14] Gresham's
Law holds because money is a multi-functional kind.

A potential conflict between two functions, however, is not enough for theoris-
ing. Gresham's Law is a *behavioural* consequence of the conflict, and presupposes
a set of mechanisms that govern people's reactions to the conflict. In this case, the
behavioural model in the background is pretty obvious – to an economist, at least –
and hardly requires mentioning: it is assumed that people prefer to consume more to
less, that they prefer to save a fraction of their resources for future consumption, and
that they choose an optimal saving-consumption allocation, given their budgets and
preferences. Like Gresham's Law, these behavioural principles are not supposed to
be exceptionless, but are taken as rough generalisations that are good enough for the
purpose at hand. As we shall see shortly, similar principles ground theory building
also in areas of the social sciences – such as anthropology – that superficially may
seem very different from economics.

4.2 Matrilineal kinship

Matriliny – the attribution of kinship through the female line – accounts for 20–25%
of kinship institutions recorded in the anthropological record, in societies scattered
across North America, Central Africa, and the Southern Pacific. A hypothesis that is
now considered obsolete took matriarchal and matrilineal systems to be the remnants
of an ancestral form of family organisation that was gradually displaced by patrilineal
and double descent systems with the advent of pastoralism and plough agriculture.
Such a hypothesis, if true, would fit the theory of historical kinds perfectly: the simi-
larities between matrilineal societies dispersed around the globe would be explained
by descent from a common ancestor. But major empirical obstacles stand in the way
of this hypothesis: the historical record indicates that matriliny has emerged and re-
emerged independently in different locations at different points in time. So if matri-
lineal societies have anything in common, their shared features must be explained
differently.

What sort of properties are 'clustered', to begin with? Matriliny is correlated with
horticulturalism, a mode of subsistence that entails a relatively egalitarian division
of labour among adult males and females. It is also associated with matrilocality
(the husband moves into the household of the wife), with high rates of divorce, and
with relatively unusual institutions such as uncle fatherhood, ghost marriage, and
woman marriage.[15] Anthropologists have proposed various theories to account for
these peculiar features and to distinguish matriliny from other systems of kinship
(e.g. Mattison, 2016; Surowiec et al., 2019). For reasons of space it would be impos-
sible to summarise this debate here, but to give an idea I will focus on an explanation

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[14] For the same reason, during times of high inflation, workers tend to spend their salaries as soon as they
have been cashed, and use a more stable (e.g. foreign) currency for saving purposes.

[15] In 'uncle fatherhood' systems, children are educated by a maternal uncle rather than by their biological
father (i.e. the mother's husband). In 'ghost marriage', the woman is married to a deceased man who is
said to impregnate her by visiting at night in ghost-like form. In 'woman marriage', a wealthy and typically
older woman marries a younger, more fertile woman who gives birth to children that will belong to the
former's family. See e.g. Krige (1974).

that emphasises the tension between three functions of kinship systems – political alliance, property rights, and the raising of children.

According to this explanation (Jones, 2011), matriliny is caused by matrilocality, and matrilocality emerges in response to external threat. A fundamental assumption behind the hypothesis is that politics is a masculine activity, aimed at regulating conflicts, and that the strongest political alliances are forged between the male members of a family. An advantage of matrilocal household systems is that in case of aggression not only the local males (the maternal uncles, cousins and nephews) but also the members of the husband's family can be quickly recruited for defensive purposes. This arrangement however has some drawbacks. Since rules of exogamy prescribe that spouses belong to different families, husbands are always 'foreigners' in matrilocal households. The property they own – if any – is located elsewhere, in their place of birth. For these reasons, there will be a tendency for husbands to spend time with their own kin, effectively to control their women (sisters) and the property (the land) they own. There will also be a tendency to establish strong relations with their sisters' offspring, who will eventually inherit the land. Husbands thus often return to their birthplace, effectively terminating their marriages after they have fulfilled their reproductive function.

Since matriliny is a multifunctional kind, the persistence of matrilineal groups depends on their capacity to attain different goals, even when the latter are in conflict. In particular, matrilineal societies must strike a compromise between the need to extend male alliance networks as widely as possible, and the relative fragility of the resulting ties among the husband and the other adult males of the household. The difficulty of attaining an equilibrium between these functions probably explains their infrequency, and the peculiar traits that have attracted anthropologists' attention. In comparison, patrilineal and dual descent systems seem less fragile and more flexible, as shown by the variety of forms they take in different societies.

Like monetary theories, anthropological explanations rely on a series of assumptions about human behaviour. Unlike economists, anthropologists do not privilege micro- explanations, but are happy to rely on a variety of principles based on gender roles, biological mechanisms, and social relationships. In a classic and widely used textbook (Fox, 1967), for example, the characteristics of different kinship systems are rationalised on the basis of four fundamental principles:

P1. The women have the children.
P2. The men impregnate the women.
P3. The men usually exercise control.
P4. Primary kin do not mate with each other.

P1 and P2 are rooted in human biology. P3 and P4 are neither biological nor psychological 'micro' principles, but are best interpreted as 'stylised social facts'. P4 is the rule of exogamy. P3 is carefully presented by Fox as a rough descriptive generalisation that holds in most traditional societies, regardless of its normative correctness. The analysis of matrilineal institutions sketched earlier assigns a central role to male politics and, as a consequence, to P3. The forms of control that men exert over women and other (younger) males depend crucially on their proximity to land, to other family members, and on their capacity to form alliances with other males.

Although these forms of control vary, the evidence suggests that only some arrangements are robust or stable. To explain why certain clusters of properties are frequently reported in field work, while others are rarely detected, anthropologists identify mechanisms that determine several features of kinship systems at once. Matrilocality and matriliny, for example, are linked by a direct causal relation in Jones' (2011) model, while high divorce rates are a by-product of the interaction between male politics, matrilineal inheritance, and matrilocality. The very idea of a 'typical' matrilineal system is based on the presumption that, while some institutional solutions are viable, others are improbable or have a tendency to become unstable in the long run.

To sum up: the ambition to formulate general theories is fairly common in social science, and co-exists with the recognition of diversity. Theories are supposed to hold in spite of the multiple ways in which institutional kinds are realised in different human groups. Three factors make this sort of theorising possible: first, many institutions have multiple functions; second, these functions interact and sometimes clash with one another; finally, although such conflicts may be resolved in principle in different ways, in practice the way in which the functions are simultaneously fulfilled is constrained by fundamental behavioural principles.

As a consequence, the third premise of NMA does not hold. The functional properties of some kinds come in 'packages', so to speak. Since they do not emerge independently, the 'miracle' of property correlation is dispelled. The space of property clusters is not equally populated, and some institutional arrangements are more frequently observed than others. Such cases provide an ontological rationale for social scientists' attempts to theorise across reproductive lineages: some social categories are projectible because they capture multi-functional kinds.

5 Mind the question

Before reaching the concluding section, a seemingly obvious objection must be addressed. The historical view insists on one specific point, namely, that the members of social kinds are genealogically related. At the end of her seminal essay, Millikan observes that.

> Humans, as a single historical kind, are born with certain broadly similar functional goals built in. They come in the world with the same sort of desires, responsive to roughly the same 'primary reinforces'. Because of this, they have certain very broad behavioral and psychological dispositions in common. (Millikan, 1999, 63)

The members of all human societies belong to the species *homo sapiens*, which is, obviously, an historical kind. On a broad interpretation, then, *all* the properties that constitute social kinds are genealogically related. The behavioural principles that (according to the theory of multi-functional kinds) make theorising possible, hold across societies for an obvious reason. A friend of historical kinds may thus argue that

the examples examined earlier are not only consistent with her view – they actually confirm it.

Although Millikan is undoubtedly on the right track, the relationship between membership in the same species and social kind membership deserves some discussion. Let us agree that homo sapiens is an historical kind: How explanatory is this fact, and what exactly does it explain? Membership in the same species does not explain why matriliny is correlated with fragile marriage relations or with horticulturalism. It rather explains why the same behavioural principles explain the clustering of institutional properties across different historical lineages and cultures. It does, in other words, provide a second-order explanation of the phenomenon we are interested in.

Pragmatic theories of explanation offer a simple way to make this point.[16] The clustering of social properties raises different explanatory questions at different levels of analysis. First, one may want to know why some properties (P, Q, R, …) are likely to occur jointly. Let us suppose that the answer (the mechanism holding P, Q, R together) is X. A different set of questions then concern X itself: Why is X explanatory? What makes it explanatory in a given domain of application – across different historical lineages, for example?

Returning to our examples: membership in a common historical kind (homo sapiens) explains (i) the universal character of the problems that kinship or money solve, and (ii) the fundamental behavioural principles that set limits to the space of possible solutions. These principles, in turn, explain the correlations between the properties of kinship, or the monetary laws that we observe empirically. The common historical cause (membership in the same lineage) is twice removed from the explananda, while functions and behavioural principles directly explain the properties of matrilineal systems or Gresham's law.

Notice that the proximity of an explanatory factor to its explanandum is important not only for theoretical but also for practical reasons. Social scientists are frequently interested in comparative questions (why properties P-Q-R instead of R-S-T?) because they care about prediction and intervention. Intervention, in particular, requires counterfactual knowledge: What would happen if so-and-so were the case? What kind of factors may trigger alternative scenarios? To notice that humans belong to the same species does not usually contribute to answer such questions.

Historians in contrast are primarily interested in 'existential' questions (Why does X exist? How did it become what it is?) and only occasionally engage in counterfactual speculation (What if X had not happened?). When they do, of course, they often rely – implicitly or explicitly – on theoretical principles that hold across different historical pathways.

6 Concluding remarks

Ontological questions can sometimes be answered on the basis of empirical facts about the success (or lack of success) of particular scientific projects. The case of social science, given its patchy record, is peculiar in this respect. Social scientists

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[16] Classic statements can be found in van Fraassen (1980) and Garfinkel (1981).

undoubtedly succeed in gathering data on specific cultural traditions and formulating local theories that hold within a limited domain. Sometimes, however, they also formulate general theories that are supposed to hold across lineages, cultures, or traditions. The fact that they occasionally succeed raises interesting philosophical questions. While philosophers with an instrumentalist attitude simply notice that some theories do better than others, realists seek an *explanation* of their success.[17]

I have argued that explaining social scientists' ambitions – and occasional success – calls for a pluralistic ontology of the social world. Interesting theorising with a general scope of application is sometimes made possible by the fact that some social kinds – typically, institutional kinds – are multi-functional. Since the institutions that humans create are shaped in such a way that they can solve different problems at once, their functions are also interrelated. Multiple functions, together with the behavioural constraints that are typical of homo sapiens, support the formulation of general, a-historical theories.

This does not imply that the theory of historical kinds is wrong: many social kinds are historical, in the sense that the correlations between their properties are best explained by processes of cultural replication or reproduction. And it does not imply that only multi-functional kinds are projectible across historical lineages. Other mechanisms may allow social scientists to draw successful inferences across different societies and cultures. The goal of this paper has been to highlight one feature of projectible social kinds that has been overlooked until now. An important part of social theory aims at explaining, at a high level of abstraction, why some institutional arrangements, but not others, provide effective stable solutions to the several problems that human organizations must simultaneously solve.

Declarations

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[17] They ask 'What is the world that we may know it?' (Kornblith's, 1993, 2).

References

Boyd, R. (1991). Realism, anti-foundationalism and the enthusiasm for natural kinds. *Philosophical Studies*, *61*(1), 127–148.

Boyd, R. (1999). Kinds as the "workmanship of men": Realism, constructivism, and natural kinds. In J. Nida-Rumelin (Ed.), *Realism, revision, rationality* (pp. 52–89). de Gruyter.

Buller, D. J. (Ed.). (1999). *Function, selection, and design*. SUNY Press.

Couch, M. (2005). Functional properties and convergence in biology. *Philosophy of Science*, *72*, 104–151.

Craver, C. F. (2009). Mechanisms and natural kinds. *Philosophical Psychology*, *22*(5), 575–594.

Currie, G. (1984). Individualism and global supervenience. *The British Journal for the Philosophy of Science*, *35*(4), 345–358.

Dutu, R., Nosal, E., & Rocheteau, G. (2005). *The tale of Gresham's law*. Economic Commentary, Federal Reserve Bank of Cleveland.

Ereshefsky, M., & Reydon, T. A. (2015). Scientific kinds. *Philosophical Studies*, *172*(4), 969–986.

Foucault, M. (1976). *Surveiller et punir: Naissance de la prison*. Gallimard.

Fox, R. (1967). *Kinship and marriage: An anthropological perspective*. Cambridge University Press.

Garfinkel, A. (1981). *Forms of explanation: Rethinking the questions in social theory*. Yale University Press.

Garson, J. (2019). *What biological functions are and why they matter*. Cambridge University Press.

Godman, M. (2020). *The epistemology and morality of human kinds*. Routledge.

Greif, A., & Kingston, C. (2011). Institutions: Rules or equilibria? In N. Schofield & G. Caballero (Ed.), *Political economy of institutions, democracy and voting* (pp. 13–43). Springer.

Guala, F. (2016). *Understanding institutions*. Princeton University Press.

Guala, F., & Hindriks, F. (2015). A unified social ontology. *The Philosophical Quarterly*, *65*(259), 177–201.

Hacking, I. (2004). *Historical ontology*. Harvard University Press.

Hayek, F. A. (1962). The uses of 'Gresham's Law' as an illustration in historical theory. *History and Theory*, 2(1).

Jones, D. (2011). The matrilocal tribe. *Human Nature*, *22*(1), 177–200.

Khalidi, M. A. (2013). *Natural categories and human kinds*. Cambridge University Press.

Khalidi, M. A. (2018). Natural kinds as nodes in causal networks. *Synthese*, *195*, 1379–1396.

Khalidi, M. A. (2022). *Social historical kinds*. Unpublished paper, CUNY Graduate Center.

Kim, J. (1992). Multiple realization and the metaphysics of reduction. *Philosophy and Phenomenological Research*, *52*(1), 1–26.

Kornblith, H. (1993). *Inductive inference and its natural ground*. MIT Press.

Krige, E. J. (1974). Woman-Marriage, with special reference to the Louedu—its significance for the definition of marriage. *Africa*, *44*(1), 11–37.

MacIntyre, A. (1981). *After virtue*. University of Notre Dame Press.

Mattison, S. M. (2016). Matrilineal and matrilocal systems. In N. Naples, R. C. Hoogland, M. Wickramasinghe & W. C. A. Wong (Eds.), *The Wiley Blackwell Encyclopedia of gender and sexuality studies* (pp. 1655–1660). John Wiley & Sons.

Millikan, R. G. (1999). Historical kinds and the" special sciences. *Philosophical Studies*, *95*(1/2), 45–65.

Millikan, R. G. (2017). *Beyond concepts: Unicepts, language, and natural information*. Oxford University Press.

Mill, J. S. (1874). *A System of Logic*. Harper & Brothers, 8th edition.

North, D. (1990). *Institutions, institutional change and economic performance*. Cambridge University Press.

Papineau, D. (2009). Physicalism and the human sciences. In C. Mantzavinos (Ed.), *Philosophy of the social sciences: Philosophical theory and scientific practice* (pp. 103–123). Cambridge University Press.

Polger, T. W., & Shapiro, L. A. (2016). *The multiple realization book*. Oxford University Press.

Roland, A. (2003). Once more into the stirrups: Lynn White Jr., "Medieval Technology and Social Change". *Technology and Culture*, *44*, 574–585.

Rosenberg, A. (2009). If economics is a science, what kind of a science is it? In H. Kincaid, & D. Ross (Eds.), *The Oxford Handbook of Philosophy of Economics* (pp. 55–67). Oxford University Press.

Sawyer, R. K. (2002). Nonreductive individualism: Part I—Supervenience and wild disjunction. *Philosophy of the Social Sciences*, *32*(4), 537–559.

Scriven, M. (1956). A possible distinction between traditional scientific disciplines and the study of human behaviour. In *Minnesota Studies in the Philosophy of Science* (Vol. 1, pp. 330–339). University of Minnesota Press.

Shapiro, L. A. (2000). Multiple realizations. *The Journal of Philosophy*, *97*(12), 635–654.

Surowiec, A., Snyder, K. T., & Creanza, N. (2019). A worldwide view of matriliny: Using cross-cultural analyses to shed light on human kinship systems. *Philosophical Transactions of the Royal Society B,374*, 20180077.

Taylor, C. (1985). *Philosophical papers* (Vol. 2). Cambridge University Press.

van Fraassen, B. C. (1980). *The scientific image*. Clarendon Press.

Weiskopf, D. A. (2011). The Functional Unity of Special Science Kinds. *British Journal for the Philosophy of Science*, *62*, 233–258.

White, L. (1964). *Medieval technology and social change*. Oxford University Press.

Young, H. P. (1996). The economics of convention. *Journal of Economic Perspectives*, *10*, 105–122.

Zahle, J. (2007). Holism and supervenience. In S. Turner & M. W. Risjord (Eds.), *Handbook of the philosophy of science:Philosophy of anthropology and sociology* (pp. 311–341). North-Holland.