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Take my word for it: How professional vocabularies foster organizing

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ABSTRACT

Professional vocabularies are sources of categories that non-professionals borrow and use. Accordingly, professions play a key role in divisions of linguistic labor, generating and distributing, but maintaining control over, words that other use to guide their thinking and behavior. Collectively, organizations and fields coordinate in part through integrating words borrowed from multiple professional vocabularies, simultaneously broadening common ground across their members and assigning jurisdictions to specialized members. Thus, professional vocabularies are not only barriers but also largely unnoticed facilitators of organizing.

KEYWORDS: vocabularies; categories; professions; organizing; division of linguistic labor; borrowing; jurisdictions.

And the LORD said, 'Look, they are one people, and they have all one language; and this is only the beginning of what they will do; nothing that they propose to do will now be impossible for them. Come, let us go down, and confuse their language there, so that they will not understand one another's speech'.
Genesis 11: 6–7 (NRSV)

There are longstanding intuitions that a common language, or vocabulary, is key to organizing. Organizational research largely supports these intuitions (e.g., Collins and Smith 2006; Colyvas and Powell 2006). Yet professions and other knowledge-based occupations, as they establish jurisdictions over domains of knowledge and activity (Abbott 1988), generate systems of categories marked by distinct technical vocabularies (Fine 1995; Clark 1998). As professions and organizations are thoroughly intertwined, these two phenomena—that common vocabularies foster organizing and different professions generate different vocabularies—seem to imply a pervasive challenge of babel within organizations and fields.

If professional jargon is impenetrable, then colleagues might as well be speaking Japanese and Portuguese. When, for example, someone says something as routine as 'the intraocular lens was folded and placed into the capsular bag under direct inspection' she is not likely to be understood by the general public, just other ophthalmologists who need to talk about cataract surgery procedures. Some theorizing views professional vocabularies mainly in this way, as useful for within-profession communications and effectively impenetrable

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otherwise. For example, professions gain from imposing costs on admittance into understanding their vocabularies (Arrow 1974), as this helps in maintaining power over clients and consumers of their professional services (as reviewed by Muzio, Brock, and Suddaby 2013). Professions are acting in a kind of dilemma, placing their own power and outcomes above the potentially larger collective value to be had from coordination and cross-profession innovation.

A second line of reasoning that relies on professional vocabularies as pervasive challenges emphasizes that coordination is aided by having a common vocabulary (e.g., Grant 1996). For example, the design of work and organizational forms can align divisions of labor with divisions of cognitive labor such that those responsible for a given activity have the required expertise for it and those not responsible have little to contribute. That exclusivity and lack of interdependence is the ideal of modularity (Simon 1962), which relies on loosely coupled components with standardized interfaces (Sanchez and Mahoney 1996). Thus, both lines of logic, the one focused on self-interested professions throwing up walls of jargon and the one focused on generating walled off divisions of labor, seem to assume that professional vocabularies are barriers to organizing.

An alternative approach to professional vocabularies in organizational life is to emphasize that professional vocabularies need to be partially penetrable. Professional vocabularies are not as sharply different as Japanese and Portuguese; they are not complete barriers. Parts of professional vocabularies are taken up by non-professionals and absorbed into common parlance. For example (Abbott 1988: 98), 'Child behavior is reduced to the disease of hyperactivity, and hence to the jurisdiction of medicine'. Critically, *hyperactivity* is a term from the medical profession's vocabulary that is borrowed and used by those outside the profession, and indicates appropriate reactions and deference by those who are not medical professionals. Thus, in addition to fragmenting organizing in some ways, as implied by prior work, professional vocabularies also foster organizing in some ways.

As a rough analogy, only a small proportion of people know how train systems work and only a small amount of that knowledge is needed for the rest of us to depend on and coordinate crucial aspects of our lives around train travel. Although train accidents and large shifts in using trains as opposed to planes and cars are newsworthy, train systems are only capable of organizing so much of our lives and shifts in their use only draw our attention because we take for granted their ordinary use. The purpose of this article is to provide an account of how and why the enabling role of professional vocabularies is pervasive for non-professionals and fundamental to organizing, even if it is largely taken for granted.

Organizing requires socially distributing and coordinating activity, so it raises questions about how to divide activity, how to recognize divisions, and how to know whom to rely upon. The basis for an enabling role of professional vocabularies for organizing is that it is not only lawyers who talk about lawsuits and not only doctors who talk about heart attacks. Organizational and field vocabularies borrow words from professional vocabularies. This allows a variety of actors to recognize the use of professional vocabularies, rely on the professional judgments conferred by that vocabulary use, and infer professional jurisdictions over domains of activity. Most of us, most of the time, take professionals' words for it.

To develop an account of why and how professional vocabularies foster organizing, the three sections that follow examine what vocabularies are, how linguistic labor can be distributed such that professions guide how words are used by non-professionals, and what it means for non-professionals to borrow from professional vocabularies. The general approach is consistent with institutional accounts of the role of professions in society (Scott 2008; Muzio, Brock, and Suddaby 2013), particularly those with a focus on language (cf. Alvesson 1993, 1994). The result is a more balanced view of professional vocabularies as presenting some barriers to organizing and also enabling organizing by expanding the scope of commonly recognized knowledge. In the process, the discussion will present several constructs that help in describing professional knowledge, in considering within as well as between profession lines of authority, and in considering non-professionals' limited understandings of, but crucial reliance upon,

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professionals' words. To return to the example of *hyperactivity*, the medical profession's diagnosis of hyperactivity is not just a word for doctors, it is also a word that guides parents and organizes changes for schools, pharmaceutical companies, and regulatory bodies, among others. Words are not the only force here, but they play key roles in organizing cross-community beliefs and behavior. Words are key professional tools—not just tools like screwdrivers but also tools like trains (Putnam 1975)—in part because so many non-professionals use them.

VOCABULARIES

Professions have long been linked to bodies of specialized knowledge (e.g., Goode 1960). The professional jargons that articulate specialized knowledge are commonly encountered components of professional and organizational life. It is possible to view these vocabularies as relatively trivial and surface issues, with the real work being done by the systems of meaning they label (cf. Berger and Luckmann 1967). However, following the lead of many scholars over a long period of time (e.g., Burke 1937; Barnard 1938; Mills 1939; Weick 1995; Searle 2010) who have granted vocabularies a central theoretical position, vocabularies can also be viewed as the basis for forming those systems of meanings. Accordingly, this section presents a brief description of a vocabularies account of a profession's specialized knowledge and the portions of that specialized knowledge that non-professionals borrow.

Vocabularies as accounts of professions' specialized knowledge

Vocabularies are systems of labeled categories that guide thought and action within social collectives, such as professions (Loewenstein, Ocasio, and Jones 2012). Vocabularies consist of words (e.g., *nurses, accountants, automotive stampings firms, cooperate, competitive advantage, easement, idiopathic myocardiopathy, allowable losses,* etc.) with a history of use within a social collective (e.g., profession, organization, industry) to refer to examples (particular instances or kinds of people, groups, items, actions, ideas, etc.). Members of a profession, then, generate conventions about how to use the words and apply them to examples (Clark 1996; Millikan 2005). The social conventions produce structure, in the form of relations between words and examples (e.g., the word *scalpel* has a history of referring to particular small, sharp instruments), and relations between words (e.g., talk of *scalpels* is likely to include mention of *blades, surgeons,* etc.). The structure of word-to-example relations and word-to-word relations around a particular word produces a category. The structure in its entirety, or the vocabulary structure, produces a system of categories for the profession.

For example, an analysis of vocabularies of modern architecture, as they developed and changed in the late 19th through mid-20th centuries, provides an illustration of conventions concerning words and examples (Jones et al. 2012). The modern organic architecture vocabulary was defined in part through relating core words such as *nature, organic,* and *human,* with materials such as wood and stone. The modern functional architecture vocabulary emphasized words such as *industry, economic,* and *machine,* and linked them to materials such as steel and glass. The conventions around the use of words and examples (in the form of materials, as well as buildings) were critical to forming the meaning of the category of modern architecture, and defining the social identities of modern architects.

In this account of professional vocabularies, communication within the profession generates conventions about words and examples, from which members infer meaningful categories. *Categories* is a high-level term, including kinds of products and kinds of firms, as well as professional identities (Hacking 1986; Alvesson 1994; Cornelissen, Haslam, and Balmer 2007), motivations (Mills 1940), and social relations (Keller and Loewenstein 2011), among many other concerns. Conventions provide the basis for deriving the meanings of the words denoting these kinds of things, and so the meanings of categories. In particular, conventions about which examples are most commonly used to illustrate a word indicate which examples are deemed the most central members of the category and hence most influential in shaping its meaning. Conventions about which examples are labeled by a word and which examples are not indicate the category's boundaries and hence also shape the category's meaning. Conventions about which other

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words are related to the focal word (used as causes or effects, used as synonyms or antonyms, used in the same situational context, used to mark different aspects of the same event, etc.) shape the category's meaning as well.

There is a particular type of category that is critical for professional vocabularies. This is because the core of professional knowledge is usually discussed as abstract knowledge (Goode 1960: 903). Abbot (1988: 102–13) emphasized that the most critical abstract knowledge for professions is not the abstractions due to elimination of most characteristics (as in *thing*) but the abstractions due to 'positive formalisms' (as in the architect's *buttress*, *enclosure*, *solar load*, etc.). Cognitive science offers a substantial literature on expert knowledge, and arguably the most apt characterization of the sort of specific, abstract knowledge that is core to professions is a kind of category called a *relational category*.

Relational categories are those most strongly characterized by a particular system of relations among other categories, rather than being most strongly characterized by intrinsic properties of category members (Gentner and Kurtz 2005; see also Goldwater and Markman 2011; Rottman, Gentner, and Goldwater 2012). For example, within the legal profession's vocabulary, *gavels* and *robes* are words largely understood through the intrinsic properties of examples, whereas *defendants* and *litigants* are understood as applying to nearly any actor that can take on these roles within a larger event (e.g., a *lawsuit*) and role system (including, e.g., *judges* and *plaintiffs*). Similarly, within the architecture profession's vocabulary a building's *enclosure* is defined not by its intrinsic properties, but by its functional and spatial relationships with the rest of the building and the external environment. Critically, individuals are unlikely to know the particular specialized knowledge captured by relational categories without learning their community's vocabulary through language (e.g., Tomasello 2001; Levinson 2003). There is also evidence that individuals can more rapidly make sense of (West, Brown, and Hoch 1996) and better reason about (Loewenstein and Gentner 2005) a domain of activity with the aid of systems of words capturing relational categories. The suggestion is that professional vocabularies are generating relational categories to capture specialized, abstract knowledge that fosters professional practice.

In addition to relational categories, vocabularies also help in understanding two other aspects of specialized knowledge within professions, identities and logics of action. These critical kinds of knowledge indicate underlying dimensions of concern—values, principles—that organize many categories within the vocabulary. For example, nursing textbooks have legitimated a detailed set of conventions about the dimensions underlying the *nurse* category (Goodrick and Reay 2010). These dimensions concern, for instance, *scientific practice*, *nurturance*, and *economic activity*. Taken together, they define the nursing identity.

As vocabularies appear to be about words, it is not obvious that they also demarcate underlying dimensions. Yet the same systems of conventions that help define individual words can also give structure to systems of words. That structuring of categories can yield the underlying dimensions critical to identities and logics of action (Nigam and Ocasio 2010; Loewenstein et al. 2012). Thus, professional vocabularies are how professions generate and maintain specialized knowledge, including relational categories, professional identities, and professional logics of action.

Words, examples, conventions, and meanings

The account of professional vocabularies and categories just presented is an account founded on social conventions within professions about words and examples, not about common underlying meanings. The distinction explains how some professionals can provide words for non-professionals to use. Words and examples can spread and be used more widely than meanings because only a few conventions are needed for non-professionals to use a word. Many more conventions are needed to understand the word's full meaning within the professional vocabulary.

Stressing the gap between words and examples on one hand and meanings on the other is necessary because it is common to view meanings as primary. For example, there are proposals that members of social collectives first agree on meanings, and then generate conventions about labels and consider examples to attach to those meanings (e.g., Hannan,

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Polos, and Carroll 2007). Vocabularies here are epiphenomenal rather than constitutive. However, it is not at all clear whether it is feasible to establish social consensus on meanings, let alone how to do so, without vocabularies or some sort of semiotic system.

In contrast, it is clear how professions could generate social conventions about words and examples. Words are obviously apparent in perceptual experience, and more frequently used words are more accessible to cognition (e.g., Adelman, Brown, and Quesada 2006). Relations among words are also readily learned (Thorndike 1908; cf. Kunda and Nisbett 1986) and using one makes related others more accessible to cognition (Spence and Owens 1990). In many circumstances, word-to-example mappings are also subject to coordination and feedback (Clark 1996). So, there are clear reasons to believe that professionals' conventions about relations among words and between words and examples are readily learned and readily accessible to guide thought and action. However, meanings are not apparent (Quine 1960) and need to be inferred indirectly from vocabulary conventions, despite typically high levels of ambiguity. So, professional vocabularies are foundational to generating specialized knowledge, but not because vocabularies transparently and directly provide people with specialized knowledge. Individuals first learn the profession's conventions about words and examples.

The distinction between conventions and meanings and the causal relationships between them are particularly clear in micro-level psycholinguistics research (e.g., Fay et al. 2010). These studies show, first, that in the simplest of social situations, forming conventions about words and examples leads to convergence on meanings. For example, a study of pairs of individuals working together with novel objects (Markman and Makin 1998) found that pairs developed a new portion of a vocabulary to reference the new objects. They established common ground (Clark 1996; cf. Bechky 2003) through forming agreements on which words referred to which examples, thereby enabling coordinated action. After the task, individuals sorted objects more similarly to their interaction partners than to other individuals who had done the task. Thus, developing new vocabulary conventions about words and examples in turn promoted the development of meaningful categories that were understood as applying to old and new examples fairly consistently across individuals.

As social situations become even slightly complex, individual agency regarding the formation of vocabulary conventions is reduced, enabling larger gaps between the acquisition of conventions about words and examples and the understanding of category meanings. When individuals are coordinating with members drawn variously from the same social collective, rather than always with the same others, they tend to follow dominant conventions more regularly (Garrod and Doherty 1994). So, the average individual has to learn conventions that others have established. The larger the social collective, the more it is that prominent speakers set conventions that others then follow (Fay, Garrod, and Carletta 2000). The larger the social collective, the more it is that communications broadcast to many others (such as prominent speeches or widely distributed written texts; Boje 2001) set conventions. As such communications are widely encountered, they suffer less from variations introduced as they are told and retold (Bartlett 1932; Griffiths, Lewandowsky, and Kalish 2013). This enables the conventions about words and examples to be heard and copied. It need not provide a full set of conventions though, and so it need not adequately disambiguate meanings.

Accordingly, as vocabularies develop in professions, vocabulary conventions become formalized and entrenched. Prominent professionals and key professional texts become more influential in setting and making changes to those conventions for other professionals to follow. Professionals are socialized into and certified as having learned the profession's vocabulary conventions about how to use words and examples. This enforces some consistencies among professionals regarding the meanings of systems of relational categories, underlying dimensions, and identities. In contrast, non-professionals do not have these experiences. Instead, non-professionals hear and defer to professionals' use of words, encountering only a small fraction of the profession's vocabulary conventions. Foundational to professional vocabularies then is that some people's talk is learned and echoed by many other speakers.

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DIVISIONS OF LINGUISTIC LABOR

If most speakers follow vocabulary conventions set by others, then there is a division of linguistic labor (Schildt, Mantere, and Vaara 2011). A division of linguistic labor (Putnam 1973, 1975) is a distribution of responsibility between the minority of actors who decide what words are properly applied to what examples and the majority of actors who use those words and labeled examples. As Putnam (1973: 705, italics in the original) argued, 'every one to whom gold is important for any reason has to *acquire* the word "gold"; but he does not have to acquire the *method of recognizing* whether something is or is not gold. He can rely on a special subclass of speakers'.

The question then is who are those special speakers. Following Scott's (2008) argument about professionals as institutional agents who create cultural-cognitive frameworks, it is reasonable to conclude that this special subclass of speakers is usually professionals, because professionals provide so many of the categories that require expertise. The words *lawsuit* and *heart attack* are part of commonly held vocabularies, and it is not just deciding what counts as a lawsuit or as a heart attack but also understanding what those are and how to respond to them effectively that is decided by professionals rather than being common knowledge.

Professionals do not act in isolation but within fields and within organizations (Muzio and Kirkpatrick 2011). Those outside their professional boundaries rely on a subset of professionals' vocabulary conventions, borrowing and largely deferring to professionals' authority over those categories. For example, the medical profession has an interest in maintaining control over the practices of medicine—and professional vocabularies are critical to those practices. Yet the medical profession also has a strong interest in ensuring that non-medical professionals know that medical practices exist and are important to non-medical professionals—and professional vocabularies are critical to this effort as well. It is important that non-professionals know the word *heart attack*, for example, and know that heart attacks are important, and know that doctors are the ones who identify and handle heart attacks. But understanding what a *heart attack* is and how to treat them (let alone all their subtypes and related concerns that are the typical focus of a cardiologist) requires substantial knowledge about many other things. The medical profession needs non-professionals to know some words and some examples and some conventions about heart attacks, but not too many. Those outside the medical profession are typically better off not having to engage in the substantial efforts needed to learn all the remaining conventions about heart attacks. They just need to feel that someone credible knows what they are and can tell them what to do.

The earlier discussion of relational categories and underlying dimensions as core aspects of professionals' specialized knowledge provides useful insights into divisions of linguistic labor. To continue the *heart attack* example, it is because *heart attack* is a relational category that there is such a divide between medical professionals' and non-professionals' understanding of the term. Non-professionals do not know the system of categories and underlying dimensions from the medical profession's vocabulary that provides the more complete meaning of *heart attack*. Relational categories rest on conventions about other categories, and underlying dimensions are typically indicated implicitly, through patterns of conventions across collections of categories (e.g., Colunga and Smith 2005). Professionals typically require years to learn these conventions, and non-professionals generally know little about these conventions. This leads to misunderstandings of words from professional vocabularies by non-professionals, who fail to grasp the relations underlying relational categories. It is perhaps amusing when the child says that *islands* are places with sandy beaches and palm trees, rather than bodies of land surrounded by water (Keil and Batterman 1984). It is less amusing to hear that your relatives *diversified their portfolio* by buying funds from different brokerage firms.

That individuals vary in their understandings of professional vocabularies is in some ways unremarkable. Although some initial discussions of speech communities implied homogenous understandings across the community, this idea has long been dispelled in sociolinguistic research (Hymes 1967), and communities of practice are clearly marked as being comprised members with variable levels of knowledge and expertise (e.g., Lave and

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Wenger 1991). We are not surprised when students and apprentices have partial understandings of professional vocabularies. We assume that professional students will learn words from professional vocabularies and expect those students to have some understanding of those words and how they are applied and relate to each other. But we do not expect professional students to define what the words mean. There is a subset of professionals (Guillén 1994) responsible for that.

Outside of the role of education, there is also an expectation that although many might use words from a professional vocabulary, some have more power over those words than others. A stark example of this division of linguistic labor comes from the 19th century slate industry within Wales (Manning 2001). The vocabulary around quarrying slate was largely in Welsh, as Welsh workers largely dominated quarrying practice. That is, the words used to describe slate as found in nature were Welsh words, in a specialized Welsh vocabulary regarding, for example, types of rock faces, defects, labor processes, and social roles. However, the vocabulary of finished slate was in English, as the English quarry owners dominated the process of purchasing and selling finished slate. The language difference makes the division of linguistic labor particularly clear. The result is that divisions of linguistic labor provide a means of generating common vocabularies with input from specialized vocabularies, which share just a portion of the conventions about words and examples that comprise the categories.

Within-profession divisions of linguistic labor

Divisions of linguistic labor are nested. In addition to a division of linguistic labor between organizational vocabularies and professional vocabularies, there are also divisions of linguistic labor within professional communities. Professions can have hundreds, thousands, even millions of members, and can be globally distributed. How and how uniformly vocabulary conventions are generated and maintained are important questions that divisions of linguistic labor help to answer.

Scott's (2008) role typology of creative, clinical, and carrier professionals is a useful starting point. Creative professionals are likely to be responsible for shaping the vocabulary use of clinical professionals, who put it to use with clients and non-professionals in their own organizations (Daudigeos 2013), and carrier professionals, who disseminate the vocabulary through field-level communications (Greenwood, Suddaby, and Hinings 2002). So, as a first cut, the relative minority of creative professionals disproportionately set vocabulary conventions that clinical and carrier professionals then use and further disseminate to non-professionals.

Regarding what those specific conventions are, one characterization of professional practice (e.g., Abbott 1988) is that it consists of classifying, reasoning on the basis of those classifications, and then taking appropriate kinds of responses. With Scott's (2008) typology, we could say this characterization applies most strongly to clinical and carrier professionals. Creative professionals in contrast are disproportionately responsible for setting the categories, their bases, and appropriate responses that the others then put into practice. For example, creative professionals are the ones most likely to set standards of care, best practices, and formal taxonomies and their use (e.g., nursing intervention classifications; Bowker and Star 1999). This is a division of linguistic labor at a next level down in terms of complexity.

Creative professionals are influential for multiple reasons. Creative professionals are likely to be leading experts, even relative to other professionals. It is not just that experts have substantially different knowledge than non-professional novices (Chi, Feltovich, and Glaser 1981; Medin and Atran 2004), there are also significant differences among levels of expertise (e.g., Chase and Simon 1973; Ericsson and Lehmann 1996). Creative professionals also wield power and status (Johnson 1972). Creative professionals are likely to train other professionals, to serve as gatekeepers to other professionals and professional actions, and to apportion resources to other professionals (cf. Freidson 1986). This enables creative professionals to be particularly influential in shaping vocabularies within their professions.

A vocabularies approach, relying on conventions, allows an extension of Scott's (2008) taxonomy. Creative professionals are not themselves likely to be unified. Clinical and carrier professionals are also

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likely to oversee some portions of the professional vocabulary that are most central to their activities and the artifacts they use (cf. Bechky 2003). Further, apart from these roles, professions can rely upon multiple logics and so organize categories in multiple ways, yielding multiple meanings, such as the variation in understanding *care* among physicians (Dunn and Jones 2010) and the variation in understanding *space* among architects (Jones and Livne-Tarandach 2008). Professions, like other communities, provide many reasons for cognitive factions (Kitcher 1990). So, instead of relying strictly on the creative, clinical, and carrier categories, the earlier discussion of vocabulary conventions and dominant speakers and texts provides a richer explanation of within-profession variation.

Guiding divisions of linguistic labor is likely to be a matter of prominent speakers generating widely observed texts and the maintenance of stable communications channels, as these foster stability in vocabulary conventions. As we can empirically trace sub-communities of speakers following coherent conventions (e.g., Keller and Loewenstein 2011; Anders and Batchelder 2012) and trace the influence of one text on future texts (e.g., Landauer, Foltz, and Laham 1998; Ocasio and Joseph 2005), these are testable claims.

This discussion implies that divisions of linguistic labor within professions are complex, but this complexity is bounded in its effects on non-professionals. It is bounded because individuals vary in their understanding of conventions about words and examples, and so about meanings. Much of the debate and variation within professional communities and sub-communities is over the conventions refining those meanings. There is much wider consistency on basic words and prominent examples of those words. Accordingly, internal debates within professions are unlikely to change what non-professionals think, because the discussions are mostly outside the scope of what non-professionals encounter and learn. Absent high needs for coordination or understanding, within-profession disagreements are likely to go unnoticed by non-professionals. This argument holds, albeit at a somewhat deeper level of understanding, within professions as well, as most professionals leave debates to a relative few specialized professionals, and use the dominant vocabulary conventions. Thus, the division of linguistic labor does not rest on full consensus on meanings but rather on highly consistent tendencies to use certain words and examples and modal tendencies in applying words to examples and relating words to each other, on which non-professionals can rely for extended periods of time.

The division of linguistic labor argument fills explanatory gaps in understanding professions and their specialized knowledge. Divisions of labor, in themselves, do not directly provide mechanisms for one profession to influence the thinking of non-professionals. Divisions of cognitive labor (e.g., Faraj and Sproull 2000; Hollingshead 2001), in themselves, do not provide mechanisms for extending beyond small groups. Divisions of linguistic labor provide mechanisms for both of these critical concerns. Professionals can generate and govern vocabularies, parts of which they disseminate broadly for others to use, but not master. Given the highly developed divisions of labor in modern society, the implication is that for most people, most of the words capturing sophistical knowledge are borrowed from a professional or other specialized community that develops and is responsible for it. 'I'll take your word for it'.

BORROWING FROM PROFESSIONAL VOCABULARIES

Divisions of linguistic labor imply that many borrow the words of a few—that non-professionals borrow words from professionals. As it is common to think of words as being concerned with ideas, it is useful to note that words have a material aspect as well (Shankar and Cavanaugh 2012). They are sounds and marks that can be copied and distributed without knowledge, with limited knowledge, or with profound knowledge of their semantic content. Clearly there are situations where high levels of knowledge about professional categories are needed and expected, such as when coordination needs are high. These are times when non-professionals can experience the barriers of professional jargon, and when multi-profession interactions (and conflict) are particularly rich (e.g., Heimer 1999; Purdy and Gray 2009; McPherson and Sauder 2013). However, far more common but less often remarked

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upon are all the times when words from professional vocabularies are borrowed as a matter of course, with limited awareness of detailed knowledge.

General management vocabularies readily indicate this everyday borrowing from divisions of linguistic labor, as they incorporate words from multiple professions and functional areas. For example, purchasing managers need not know precisely what *absorption costing* is or how to determine it, but they could well know that it is one reason they generate reports for their accounting department. Further, the division of linguistic labor provides a straightforward means for coordinating divisions of labor without lower-order understandings or defined interfaces. This is related to an old point (Meyer and Rowan 1977: 349) that 'some can say that the engineers will solve a specific problem or that the secretaries will perform certain tasks, without knowing who these engineers or secretaries will be or exactly what they will do'. General management vocabularies similarly borrow categories from professional vocabularies and leave the internal complexities of those categories to the professionals.

There are several markers of borrowing that provide cues to non-professionals to accept. For example, a speaker can use words that are nearly exclusively applied in the context of the specialized vocabulary, such as by repeating jargon as used by professionals, as in *in-line four-cylinder engine* (Rosa and Porac 2002). The rarity and consistency of situations in which these words are used indicate that they are being borrowed from a community, typically a professional community, with authority over them. If the words used are used in colloquial as well as professional vocabularies, such as *gasoline* or *upstage*, then speakers can mark that they intend the professional vocabulary's use of the word by adding linguistic hedges, such as *technically* or *strictly speaking* (e.g., Kay 1987; see also Fraser 2010) to indicate that they are using the words according to a profession's dictates. Yet most borrowing is done routinely and without hedging.

Using rather than understanding professionals' words

Non-professionals largely need to use words and their attendant categories, rather than understand them. This is roughly similar to how one uses a cell phone or drives a car without understanding how those items work. Divisions of linguistic labor and borrowing from professional vocabularies combine to give non-professionals a large range of categories to use without placing much burden of learning or understanding on them.

Typically, speakers presume that words capture meanings, and borrow words as a matter of course. They are led to this by some heuristics about language use. For example, non-professionals largely hear words from professional vocabularies used generically, such as *in-line four-cylinder engines are lightweight*. This kind of generic statement implies that in-line four-cylinder engines are a kind of thing that exists in the world, and that such engines have the property of being light in weight. Non-generic statements apply to specific examples, whereas generic language indicates that one is talking about an essentialized, reified category (Gelman 2003). Generic statements are a means by which professional vocabulary use enables a category constructed by members of the profession to become a social fact for those outside the profession.

Non-professionals often come to assume that categories from professional vocabularies are real, taken-for-granted kinds, and do so in part because of not understanding the detailed meanings of those categories. As the quote from Putnam earlier about *gold* illustrated, less than perfect knowledge of vocabulary conventions is not a barrier to using words from a vocabulary. Professionals' categories absorb uncertainty (March and Simon 1958). They provide feelings of concreteness and closure that do not rely on individual understanding. Non-professionals' understandings of a professional vocabulary's categories appear to be quite limited, and more limited than they themselves believe them to be.

For example, a study of non-professionals' understandings found that non-professionals consistently overestimated their own knowledge of how kinds of examples such as *hearts* work (Rozenblit and Keil 2002). In contrast, non-professionals did not greatly overestimate their simple factual knowledge. Non-professionals confidence in, say, that the heart pumps blood was far more accurate than their accounts of how hearts do so. Non-professionals

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had difficulty expressing much more than that blood enters the heart, the heart squeezes, and blood exits the heart, with chambers, valves, electrical impulses, and all else unknown or forgotten. Simple factual information can be learned from vocabulary conventions and repeated without detailed knowledge of the categories themselves. In contrast, understanding what categories are, how their members function, and what indicates category membership requires deeper knowledge than many, as non-professionals, ever learn or remember.

The vast and routine borrowing that non-professionals do from professional vocabularies leads to the mistaken impression that they understand the categories. It is a case of people not knowing what they do not know (Dunning, Heath, and Suls 2004). Non-professionals are not privy to the conversations and conventions around words within the profession. Consequently, most of what non-professionals understand of words from professional vocabularies is some conventional examples and that there is a group of professionals who do know what the categories are all about. 'I know' is often short for 'I (believe there are professionals who) know'.

A key reason why non-professionals can use words from professional vocabularies so readily is that professionals have already labeled many of the examples that non-professionals encounter. Products come with labels, people come with labels, events come with labels, organizations come with labels, and so forth. Professionals need not talk directly to every non-professional. There are typically chains of borrowing that enable a small number of speakers to pass labels onto many others (cf. Kripke 1971). This removes individuals' need to understand how to identify examples that fall into the categories labeled by the words. All that is required is a sense of what one should do given the labeled example. For example, I do not need to know much about tumors, migraines or pills to know that when the doctor says I do not have a tumor but a migraine, I should take the pills and feel grateful.

Seeking professionals' words

When examples do not come with words attached, non-professionals seek professionals to label them. Non-professionals seek diagnoses, analyses, judgments, and opinions from professionals. Non-professionals and professionals alike typically assume that professionals' classifications are not arbitrary, but based on professional knowledge. Accordingly, it is often crucial and influential what words (*cancer*, *bankrupt*, etc.) professionals ultimately apply to what examples.

Even in cases in which non-professionals might generate a label themselves, the key issue is often whether it was a professional who granted the label. A substantial amount of economic activity hinges on acts of professional labeling, such as certifications, authentications, appraisals, and endorsements (Irvine 1989). The rates on a bond offering can vary substantially based on a professional analyst's bond rating. Certifications offered by the professionals granted the authority to make them can have profound consequences (cf. Douglas 1986), including initiating and stopping lines of action and flows of resources, and resulting in successes and failures, life and death.

An obvious problem that arises is the possibility that professionals will abuse their labeling powers. For example, the United States Justice Department's Medicare Fraud Strike Force has charged multiple groups of physicians involved in intentional misdiagnoses resulting in billions of dollars in false billings (e.g., Department of Justice 2012). Or, after financial analysts were paid to certify bonds as AAA that later turned out not to merit that certification, their defense against a lawsuit asserted that the AAA ratings were simply acts of puffery, akin to advertising copy or an exaggeration in a sales pitch (Pettersson 2013). This is not just information asymmetry at work but also an agency issue due to the division of linguistic labor and authority over the application of professional vocabulary due to field and society level conventions and legal obligations.

An additional problem with borrowing from professional vocabularies is that the typical transparency of borrowing can lead to miscommunication, due to assumptions by professionals that non-professionals will understand them. This is a curse of knowledge effect (Camerer, Loewenstein, and Weber 1989). For example, in a typical diabetes care visit, doctors use four terms from professional vocabularies without explaining them, and patients typically

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understand (at a level suitable to guide their behavior in the way the doctor intends) just one of them (Schillinger et al. 2003; Castro et al. 2007). This kind of misunderstanding is a problem because patients' understandings predict their success in managing their health (Macabasco-O'Connell et al. 2011). The organizational implications are poor coordination (Okhuysen and Bechky 2009), particularly the poor coordination of understandings (Cronin and Weingart 2007), and so lost opportunities, conflict, and lowered performance.

Presumptions based on the borrowing of professionals' words

The division of linguistic labor provides a means by which professionals can act as institutional agents (Scott 2008), providing the categories that act as premise controls (Weick 1995) and guides to action (Mills 1939, 1940) for non-professionals. Long ago, Burke (1937: 4) noted that vocabulary conventions imply guidance for action: 'call a man a villain, and you have the choice of either attacking or cringing'. Non-professionals can learn such conventions even if they do not necessarily know why one category should lead to another. Non-professionals usually make implicit assumptions (such as because of the generic use of labels, as noted earlier): presumably some professional legitimately established the nature of the example; some professional determined that the example is a member of category; some professional determined that the category is good or bad; some professional determined what kinds of reactions one is likely to have; and, deeper still, some professionals established that the category is a kind of thing that exists in the world. Borrowing hinges on acceptance and use more than understanding.

Accordingly, if 'problems are relative to an ethos' (Mills 1939: 675), then professionals, by shaping vocabularies that others draw from, are playing key roles in establishing what others view as reasonable and unreasonable (Schildt, Mantere, and Vaara 2011). The focus on use, as well as the few categories involved in appraisals relative to the many categories and relations involved in explanations mean that professionals convey to non-professionals that something is reasonable or unreasonable much more widely than they grant insight into why something is deemed reasonable or unreasonable.

As there is a gap between using and understanding, the conventional borrowing by non-professionals of words from professionals' vocabularies grants the professions authority. For example, when we use the words *easement* or *allowable losses*, we do so with the usually unspoken understanding that the legal and accounting professions hold sway over the terms, as these words are drawn from those professional vocabularies.

Further, common vocabularies can cluster together multiple words from particular professions, making common the assumption that there is a domain of knowledge and activity indicated by those categories, with particular roles and professional identities involved. Thus, borrowing can provide a basis for indexing in collective memory (cf. Walsh and Ungson 1991) portions of professional vocabularies. This serves to foster broad understanding of the legitimacy of the domain and professionals' jurisdiction over it, given divisions of linguistic labor. So, rather than professions keeping their words to themselves in attempts to maintain boundaries, there appear to be advantages to encouraging non-professionals to borrow from professional vocabularies, provided non-professionals perceive the words as conventionally linked to the profession. Take my words, please.

Borrowing as a means of change

A profession's specialized knowledge, particularly relational categories, provides it with opportunities to change if it can be applied and then borrowed—and so accepted—as governing new examples and domains of activity. Relational categories are flexible. Unlike categories linked to intrinsic properties of examples, relational categories have the potential to apply across many kinds of examples. Professionals applying relational categories from their vocabularies to new types of examples are generating opportunities for change and innovation, including jurisdictional changes (Suddaby and Viale 2011; cf. Zilber 2006). Relational categories help in understanding these dynamics.

For example, there are several systems for classifying nursing interventions and outcomes (Schwirian 2013; see also Bowker and Star 1999),

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which tend to cluster interventions and outcomes into types based on core words such as *care* and *management*, that are relational categories. They take on sub-types as they are applied to particular examples, as in *arterial catheter care* and *denture care*, and extended to make sense of further examples, as in *emergency care* (see Ocasio and Joseph 2005; Cornelissen 2012). The new, extended relational categories, with repeated use, then become routine classifications (Bowdle and Gentner 2005), capable of being used generically and borrowed as a matter of course. The flexibility of relational categories makes professional jurisdictions subject to change and open to innovation, as professionals can find new examples to treat as members of their relational categories (diversional care, terminal care). This allows them to rapidly extend ways of thinking and acting to novel examples, which they can then encourage others to accept and borrow.

The flexibility of relational categories means that borrowing in this way contributes to jurisdictional conflicts. For example, in the interactions of multiple professions involved in drug court proceedings (McPherson and Sauder 2013), professionals invoked relational categories from available logics to resolve ambiguities in a quarter of the cases. Whether an individual was treated as *taking responsibility for reconstructing a shattered life* or as *being punished for being a felon*, whether a solution was deemed as *for the betterment of the public* or as *financially justified*, was consequential in shaping decisions.

As multiple systems of relational categories can readily apply to the same examples, actors from multiple professions can feel that their concerns and power need to be acknowledged, if not be paramount. Heimer (1999) discusses several examples, such as over the categories of *neglect*, *custody*, *standard of care*, and *allowable care*, raising concerns across physicians, nurses, lawyers, and non-professionals. The question is whether borrowing from particular vocabularies accumulates and becomes conventional. This can shift professional control. For example, by using staff to manage *workload* and then subsuming more and more categories of activities under *workload*, politicians and school administrators in England reduced teachers' jurisdictions over aspects of student learning (Wilkinson 2005). The medicalization of domains of life (Conrad 2013: 197) is also centrally marked by the extension of relational categories from medical vocabularies to new kinds of examples.

Extending relational categories to new kinds of examples is shaped by competition between professions (Heimer 1999), by work crises (Smets, Morris, and Greenwood 2012), and also by cognition. The cognitive aspect is related to the core cognitive challenge in opportunity recognition (Gregoire, Barr, and Shepherd 2010) and strategy identification (Gavetti, Levinthal, and Rivkin 2005), which is to say it is a matter of recognizing analogies (Gentner 1983). Recognizing analogies is hard (Gentner 2010). Thus, relational categories help to clarify why professions have ever-present opportunities for changing their jurisdictions: there are latent opportunities for drawing analogies so as to apply relational categories to new kinds of examples.

Further, professionals themselves need not be the ones generating analogies using the categories from their own vocabulary. Professional vocabularies can be borrowed and adapted to serve the interests of those in other professions and non-professionals (McPherson and Sauder 2013). Colonization by and appropriation of vocabularies are sometimes two sides of the same coin (Fairclough 2005). Thus, professional vocabularies, by providing systems of categories with which to organize and interpret situations, problems, and decisions, can be used and borrowed to generate new possibilities. 'I'll take your word and run with it'.

DISCUSSION

Vocabularies, divisions of linguistic labor, and borrowing provide a new way to think about professions, professional jargon and the coordination of professional activity within organizations and fields. Some professional jargon is surely impenetrable to non-professionals, and so constrains organizing between professionals and non-professionals. Yet the current discussion has aimed to show that there are other parts of professional vocabularies that become common parlance and so advance organizing between professionals and non-professionals.

The picture of professional knowledge that emerges from this discussion of vocabularies,

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divisions of linguistic labor, and borrowing is new. Professional knowledge is a collective accomplishment, consisting largely of systems of relational categories, often organized into logics of action and governed by those with particular identities. Members of the profession reasonably consistently understand many of the categories, and non-professionals form marginal understandings of some of those categories. These broad, marginal understandings are possible because words and examples are prevalent and visible, and because echoing a professional's word use requires fairly little understanding.

The readiness with which communities can absorb new words might lead to overlooking the value in doing so or overestimating the limited level of understanding needed to do so. Situations in which multiple professions routinely interact or in which professionals and non-professionals need to coordinate closely might call for deeper levels of understanding, produce conflict, and be fascinating sites to explore both the constraining and enabling roles of professional vocabularies. Many categories in professional vocabularies are contested, and many leave open ambiguities and opportunities for subgroup variation. These are fascinating subjects of research. Yet it also seems likely that these conflicts and ambiguities are occurring against a backdrop of large scale and routine borrowing by non-professionals and routine deference to professions. Most internal conflicts and ambiguities likely occur outside the awareness of most non-professionals, and mostly concern distinctions that they do not know about. The routineness of this kind of borrowing does not render it unimportant. Rather, it suggests a concrete means for non-professionals understandings of professions and professional jurisdictions to be continually re-instantiated.

Professionals' understandings serve to guide professional activity. Non-professionals' understandings amount to collective recognition, if not also legitimation, of the profession's jurisdiction over that domain of activity. Consequently, even though specialized abstract knowledge is core to defining professions and that knowledge is well understood only by members of the profession, it is critical that others outside of the profession have (poor) understandings of some of that knowledge. Professional vocabularies are in some ways barriers—relational categories are hard to learn. In other ways—due to divisions of linguistic labor and borrowing—professional vocabularies are deeply embedded in organizational and field vocabularies and are fostering coordination.

Multiple professions typically contribute words to organizational, field, and societal vocabularies. This enables borrowing to be a means of coordinating activities between and among professions. It provides forums for jurisdictional jockeying, for good and ill. For example, Mantere (2013) describes a fascinating case in which an organization's vocabulary arguably came to be dominated by one professional vocabulary. A strong organizational division of linguistic labor contributed to minimal borrowing from other vocabularies. The result appeared to follow an exploitation path, in which initial success was followed by rigidity and a lack of alternatives to spur innovation and new direction. Borrowing from multiple vocabularies may coincide with higher levels of routine conflict and higher coordination demands as well as serve as sources of variety, change, and innovation.

Further possibilities

Professional vocabularies, divisions of linguistic labor, and borrowing raise possibilities for new avenues of research on professions and organizations as well as possibilities for studying existing research questions in new ways. For example, a core question continues to be assessing professional jurisdictions and explaining their changes. Patterns of borrowing and relational categories provide theoretical and empirical opportunities for advancing this work, as indicated in the earlier sections. Borrowing can also serve as part of an account of the standardized interfaces between professional jurisdictions, with generic, unhedged language use serving to indicate acceptance. Words and examples can be used by multiple actors, with not just different meanings but meanings with different levels of depth. In addition, a role for borrowing in marking jurisdictions could suggest that efforts at increasing borrowing outside the profession could facilitate adoption and legitimation of the new applications of the profession's vocabulary. That is, in addition to analyzing jurisdictional change as

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professions pushing outwards, it is also possible to analyze such change as following on the spread of ideas that are recognized by non-professionals.

In suggesting new angles on jurisdictional change focused on the spread in word use, borrowing from professional vocabularies links to work on translation (e.g., Zilber 2006) and recontextualization (e.g., Thomas 2003). This work stresses that meanings change as social communities change. From a vocabularies perspective, this is because meanings are inferred from social conventions about word use, and as the vocabulary within which words are used changes, it suggests changes to words' meanings as they conform to underlying dimensions and related categories in those new vocabularies. Further, borrowing emphasizes that words and examples can be used with differing levels of understanding of the profession's meaning and with different purposes. Finally, considering vocabularies and borrowing raises questions about whether the meanings of the categories denoted by the borrowed words are consistent with, separate from, or conflicting with the vocabulary conventions within which the word is being adopted.

Emphasizing professional vocabularies is broadly consistent with work taking a discourse approach to studying professions (e.g., Anderson-Gough, Grey, and Robson 2000; Iedema et al. 2004; Thomas and Hewitt 2011). Work on vocabularies and work on discourse both emphasize acts of communication and key roles for language. Work on vocabularies tends to be less focused on particular interactions and utterances and more focused on cognition and on the system of categories used to construct utterances so as to generate and organize their thought and action. Accordingly, vocabularies, divisions of linguistic labor, and borrowing indicate new areas of inquiry.

For example, although specialized, abstract knowledge has long been central to defining professions, scholarly work on professions has tended not to focus on understanding the properties of that knowledge. Vocabularies provide a means for doing so. Specifically, relational categories as a means of characterizing the expert knowledge that professions develop, manage, and employ appears particularly valuable in accounting for aspects of professions. Relational categories help to explain why professional knowledge is hard to learn, why and in what ways it is likely to be misunderstood, how it can be a source of innovation, and why and in what ways professional vocabularies are barriers to non-professionals. It may not be obvious to those outside the profession that an individual does not know the profession's knowledge base and is not recognized as an authority within the profession, but it is generally clear to those within the profession. Relational categories again are useful here. Thus, professional vocabularies that are, in large part, systems of relational categories provide a useful basis for understanding some less explored properties of professional knowledge.

Divisions of linguistic labor also indicate new avenues of research for the study of professions and organizations. The distinction between using words and shaping word meanings and the phenomenon of using examples that some label for others suggest pathways of influence to unpack. Or, one might assess which within-profession disputes and areas of lack of consensus will influence professionals and which will influence non-professionals. When are conflicts over words and their meanings trivial and when are they fierce? When can actors control divisions of linguistic labor and when are their words co-opted and transformed beyond their control? When and how do professions co-opt words and examples to pull them within their jurisdictional control? The profusion of available texts and text analysis approaches are opportunities for tracing these patterns and addressing these questions.

Finally, perhaps the most obvious research question raised by the discussion here is when professional vocabularies constrain and enable organizing. Assessing that question could involve examining what types of words organizations borrow from professions, and what levels of understanding and transformations of meaning are present. In addition, organizing for coordination might be fostered by somewhat different patterns than organizing for innovation. Knowledge flows across areas can foster coordination but can short-circuit exploration (e.g., Goldstone et al. 2013), so differing levels of borrowing could provide different profiles of possibilities and consequences.

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CONCLUSION

Outside of work that focuses on language, it is common to look through language or to erase the roles of language (Gal and Irvine 1995), seeing language as epiphenomenal rather than constitutive (Cooren et al. 2011). There are multiple arguments as to why language is constitutive, but a key one is that it demarcates the systems of categories and roles that organizing demands (Taylor 2000). Vocabularies are semiotic systems (Fairclough 1992) used as social tools (Putnam 1975; Vygotsky 1978) for tagging examples (Holland 1995), enabling members of social collectives to form conventions and so generate meaningful systems of categories representing specialized knowledge, identities, and valuations. Tagging enables a focus on some aspects of examples, which means that tagging enables the formation of perspectives, frames, models, or other abstractions (cf. Abbott 1988). As a result, tagging enables the development and coordination of actors and entities, and enables their selective interaction within larger systems. Absent vocabularies as a tagging system, there would not be the discrete entities, kinds of actors, and so on that comprise organizational life, because there would be no means for distinguishing those components from the countless other possibilities one might have thought about and enacted. If cataract surgery involves steps such as 'the intraocular lens was folded and placed into the capsular bag under direct inspection', it is informative to consider how people might coordinate on engaging in this activity, with people who need it and people who can perform it, absent professional vocabularies. That is, vocabularies provide a basis for large-scale professions, organizing and organization to occur. It is no small point then that professions play such a central role in the division of linguistic labor governing vocabularies. Take my word for it.

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