moral truths concerning society, justice, freedom, [and] respect for human life." To do so, we cannot retreat to isolated enclaves. Our Catholic conception of the human good represents not only a *legitimate* contribution to public life but also a *necessary* one.

We must of course be mindful of the limitations that our constitutional system places on the particular force that religious values may carry within our various roles in the law. As a federal judge, I know these limitations well. But the Congregation for the Doctrine of the Faith reminds us that there remains "a diversity of complementary forms, levels, tasks, and responsibilities" for faithful action in public life. In short, we must each contribute in our own way, according to our own abilities and to our own place in the profession. Within that profession, the Supreme Court answers difficult questions of our Constitution, and in so doing, shapes many of those roles for us. But the Court cannot alter our underlying calling as Catholics to participate meaningfully, deeply, and faithfully in the public sphere. I humbly suggest, therefore, that we take a decision like *Obergefell* as a wake-up call to reignite that mission in each of our lives.

Thank you, and God bless America. ■

Henry E. Smith

Nies Lecture: "Semicommons in Fluid Resources"

Henry E. Smith is the Fessenden Professor and director of the Project on the Foundations of Private Law at Harvard Law School. Professor Smith delivered Marquette Law School's 2015 Helen Wilson Nies Lecture in Intellectual Property: "Semicommons in Fluid Resources." The essay version will appear in the summer 2016 issue of the *Marquette Intellectual Property Law Review*. This excerpt is from the section titled "Managing Water."

Henry E. Smith

Water law has occupied an important and yet ambivalent place in property theory. Water law is sometimes viewed as a challenge to conventional notions of property, especially those based around exclusion. Ironically, it is also used as support for such theories, at least when it comes to the emergence of prior appropriation in the western United States.

Seeing property as the elaboration of separation and modularization in a system of complex interactions allows a different and more realistic account of water law.

Water is a fluid resource. It is a literal fluid, and this is reflected in water law. Water is notoriously hard to delineate. In the formative period of water law, very rough measurement in terms of type and length of use was the best that could be done. Typically, measurement happens upon transfer (if allowed), in order to protect those with the right to return flow.

Let's start with riparianism, which is the system obtaining in most of the United States and in England. Riparianism is based on reasonable use and thus can be analogized to nuisance. It is, therefore, clearly a governance regime. And, if anything, riparianism is moving further in that direction, as it is being subjected to a regulatory overlay.

Yet there is more to riparianism than pure governance. First, riparian rights are not open-ended. They are appurtenant to adjacent land. This gives them an exclusive character even beyond the closed community that has access. By being appurtenant to land, they become part of the modular package of rights in land and thus rest on the foundation of exclusion in land law. Under riparianism, water rights cannot be severed from riparian land, and

doctrines to prevent excessive fragmentation are required to police the rough proxy of adjacency to the watercourse, which defines access in this exclusionary regime. Further, water withdrawn from the watercourse can be used only on riparian land. Even some of the use-governance has a rough modular character, as where so-called natural wants such as drinking, household uses, and cattle raising have per se priority over artificial wants such as irrigation (in a nonarid climate) and power generation.

As with nuisance, riparianism involves evaluating conflicting rights and using rules of thumb to reconcile them. Often this is done in the course of deciding on an injunction. Equity courts have played a major role.

Let us turn to prior appropriation, which has received much attention from property theorists. Often it is taken as an example of the Demsetz thesis, in which property rights emerge when resources increase in value and externalities become worse. In arid climates, we thus get more "parcelized" water law, as exemplified in the famous case of *Coffin v. Left Hand Ditch Co.* (Colo. 1882). Professor Carol Rose has pointed out that the use of water in the East had more public goods characteristics than in the West, and this helped shape water law in the two areas. Evidence of parcelization comes from its system of priorities based on first diversion for a beneficial use, and its sometime transferability.

While it is true that prior appropriation does put in effort to define rights in water separately from land and in that sense is more exclusionary, upon closer look, prior appropriation is very much a governance regime, in keeping with the fluid character of the resource. First of all, rights are defined in terms of use, and even quantification is based on rough measurement of use. Prior appropriation does not give a right to all water diverted, but only so much as is consumed in the particular pattern of use at the time of diversion.

Because of high measurement costs, and the benefits of multiple use, water is difficult to separate and requires more emphasis on advanced forms of separation and governance to contain strategic behavior. First of all, it is necessary to acknowledge that, in both use and transfer, there remain many important third-party effects. Partly this is the result of the desirability of multiple use. Strikingly, return flows are appropriable by downstream users. This probably allows for more thorough use of the watercourse at any given time but at the cost of making transfers more cumbersome. In a further governance aspect of the system, transfers are subject to the no-injury rule, which means that in a transfer the new diversion point and the new use cannot place a greater impact on downstream junior appropriators than the old one did. As with riparianism if not more so, prior appropriation is being overlaid with public regulation.

Unlike riparianism, organizational—or entity—property plays a large role in prior appropriation. Additional internalization is achieved by entity property. Mutuals and water districts allow for separation of a group or a watershed for separate legal treatment. They promote modules of an extended sort. Within these overall modules, there is separation of function inside the entity, in terms of management and use. Water entities, especially mutuals, make intra-entity transfers of water much smoother than corresponding external transfers. Water districts mix entity property and public functions.

Finally, equity has played a major role in prior appropriation law. This is expressed in the full arsenal of equitable principles, such as maxims and defenses, when courts consider injunctions. Courts can also draw on equitable apportionment doctrine to solve particular problems of conflicting rights in interstate contexts. Apportionment is a classic example of the second-order solution to problems of complex conflicting rights.

And equity courts had historic jurisdiction over custom, which was a source of early prior appropriation water law.

In both riparian and prior appropriation systems, private and public rights interlock so tightly that it makes sense to see them as different versions of semicommons. ■