Toward the end of their *Survey of Modernist Poetry*, written in 1927, Laura Riding and Robert Graves bemoan how difficult it had become to distinguish innovation from imitation in contemporary poetry. “Criticism,” they wrote, “reared for centuries on the technical and philosophical consistency of poetry…cannot cope with *poetry in quantity*,” nor with the proliferating varieties of poetical composition. “It is not even as sure as it once was” of who are “the innovators” and who are “the copyists” (208). But they go on to admit that quantity (and the competition driving it) had made it easy to at least do one thing: identify all too obvious correspondences between poems. Such correspondences, “part of the clutter in poetry of any time,” exposed a “parasitical inter-imitativeness,” an indication that poems did not exist as “private individuals” but as “members of an institution” (217). Here are four such poems, which they reproduced without attribution or dates (Fig. 1).

The problem for Riding and Graves is that the obvious (at least to them) correspondences between these poems provoke questions that we normally do not, and should not, be asking. “Who was the inventor of the style of the first two pieces, Mr. Aldington or Mr. Williams? or yet H.D. or F.S. Flint?….In the two last pieces, who is responsible for the form? Who first thought of imitating the Japanese *hokku* form? Or rather who first thought of imitating the French imitations of the *hokku* form? Did Mr. Aldington suggest a slightly shorter poem to Mr. Stevens or Mr. Pound or did Mr. Pound suggest a slightly longer poem to Mr. Aldington, etc., or did Mr. Pound and Mr. Stevens and Mr. Aldington and Mr. Williams decide, as mutual pairs, to work as a school team, or did Mr. Williams and Mr. Stevens and Mr. Aldington and Mr. Pound pair off, as being by nationality more pairable” (Fig. 2). The passage touches upon two issues at the heart
of this paper. First, the history of the *hokku* form (now better known as haiku) in early-twentieth-century poetics, particularly its various pathways of circulation and diffusion. And second, the models and methods available for understanding the processes of imitation, influence, and reproduction that Riding and Graves so elaborately gesture to before deriding them as an unworthy concern of “the curious dustman.” They insist that “the reader, even the critic, does not have to trouble to plot out a literary chart, to develop a carefully graded technical vocabulary,” prefiguring debates over close versus distant reading in their emphasis on the autonomy of the text as object. That they arrive at this conclusion only after trying to plot a “chart” of their own serves as a reminder of how much one type of reading needs the other to conceptualize itself. We feel the relation is most productive when it is reciprocal and not either-or.

So who first thought of imitating the *hokku* form? And is this even the right question to be asking? The cultural history of how the haiku was introduced into Anglo-American poetry is well-trodden ground. It begins at the turn of the twentieth-century, when scholars and collectors of things Oriental—people like W.G. Aston, Basil Hall Chamberlain, and Lafcadio Hearn—introduced the *hokku* to academic and intellectual audiences through extended treatises and translations. The second moment involves experimental adoptions of the form in the early teens by a tight-knit circle of avant-garde English and American poets—F.S. Flint, Ezra Pound, Amy Lowell, John Gould Fletcher, and others associated with the Imagist movement—working in dialogue with “native informants” like Yone Noguchi. This is the phase to which Pound’s “Alba,” the 1912 poem cited by Riding and Graves, belongs. Following this phase is a third, less-well documented period of wider acceptance and diffusion, one that nearly reaches a point of over-saturation. The fourth poem above, from Stevens’s “Thirteen ways of Looking at a Blackbird,”
published in *Others* in 1917, fits into this phase, along with poems by Adelaide Crapsey, Conrad Aiken, William Carlos Williams, Carl Sandburg, and others.

Big data, at least in the form of Google’s N-gram viewer, would seem to corroborate this narrative (Fig. 3). If we look at occurrences of the terms *hokku*, *haikai*, and *haiku* between 1890 and 1930, we see a significant rise in the use of the term *hokku* over the teens. All three were used synonymously for what we today think of as *haiku*, though they are each technically distinct. *Hokku* refers to the opening 5-7-5 syllable sequence in what was historically a longer series of linked verses, while *haikai* refers to this specific tradition of linked verse. *Haiku* is a relative neologism, and it became the dominant term only after 1930 (Fig. 4). The ascent of *hokku* in the teens, we know, belongs to a larger story about the increasing influence of Chinese and Japanese aesthetic forms on Anglo-American poets, and here too a big data approach approximates what we already know about the rising cultural valence of East Asia in modernist poetics (what’s been called “modernist Orientalism”). Consider this network map of foreign translations published in US poetry journals and magazines from 1915 to 1930 (Fig. 5). The red lines indicate translations of Chinese or Japanese poetry, the majority of it by ancient Asian poets like Li Po, Du Fu, and others. What’s surprising about the map, however, is not just how prominent translations from East Asia were, but how widely dispersed they were across the entire literary field.

On the one hand, the map highlights Asian texts as a source of the “imitative clutter” that Riding and Graves so denigrate, but it also suggests a very different kind of “literary plot” for tracking influence and diffusion. We see here not atomized individuals sharing their ideas as if in hushed conversation, but rather, networked actors responding to a collective *chatter* across media. This is not to reject one plot for the other. But if we want to take seriously the notion of “parasitical inter-imitativeness” as a model of cultural reproduction, then we should also develop
methods for understanding it. For us, this has meant exploring specific computational techniques that excel at discovering “too obvious correspondences” between large quantities of text. These techniques can help us analyze the process by which an idea or formal innovation, like hokku, enters into a field of practice and becomes an object of imitative desire. The hokku, which conforms very well to this trajectory, proves an exciting test case and case study.

In trying to track the diffusion of hokku as a poetic form and idea, the first thing we had to do was build a corpus of hokku texts to track. Here, it’s helpful to flesh out a bit more of the cultural history since it deeply informs how we did this. Phase one, “the discovery phase,” was all about collecting and specimen gathering. And what stands out for the literary curio seekers of this phase are primarily two features of the hokku: its brevity and suggestiveness. These qualities fascinated Anglo-American poets the most, although not enough to be seen as advantageous to English poetry, or worthy of imitating. As one critic put it, “An English poet would feel naked in a hokku. He would feel as if he were clothed in a Japanese fan.” The hokku texts from this phase are primarily translations, then, as opposed to adaptations or experimentations, as in phase two. But since these translations would be influential in later phases, they constitute the first important part of our corpus. Phase two begins around 1913, largely at the hands of the Imagists. In this phase there appear a nexus of poets intensely attracted to the aesthetic possibilities of the hokku, and who retroactively note its foundational role in the movement. Three things stand out in this second stage of the hokku’s acceptance: first, its cliquish nature, allowing those involved to reinforce each other’s interest in this new innovation. Second, a general agreement about the features that made it so compelling, namely brevity, suggestion, and natural imagery. And third, a sense that it was an innovation both easy to implement and one whose effects were immediately visible. Pound’s “In a Station of the Metro,” from Poetry Magazine, illustrates this
well (Fig. 6). The haiku’s easily observable form allowed poets and critics to begin to recognize (and self-identify) hokku-like poems, and these are the texts that form the rest of our hokku corpus, precisely because they were recognized as such at the time. Here’s a distribution of these poems (about 400 total) over time (Fig. 7). Note the many poems in the late teens and early 1920s. This is phase three, America’s first haiku craze. And archival sources suggest that this may only have been a small sample of what was produced. Some saw this trend as evidence of a close rapprochement of East and West; others called to put a stop to the madness. One critic recognized the cultural value of the hokku, but also saw it as symptomatic of a more general shift in poetic practice from long to short. Less kind was the satirical magazine Siren, which mocked the hokku’s highbrow associations and ended with this refrain, in 5-7-5 form: “Do you think there is anything in this hokku stuff? Neither do I.” The hokku had truly arrived.

But how exactly had it arrived? Where, and how far, had it spread in this third phase? And was poetry really getting shorter? We can partly answer this last question. Taking Poetry Magazine as a bellwether, a graph of average and median poem length reveals a decreasing trend, with a considerable dip between 1916 and 1917 (Fig. 8). It’d be silly to think that this was all the hokku’s doing. More likely, as with any successful innovation, hokku was part of a cluster of other innovations arising independently. One way to figure out just how much of this shift it was responsible for, which also gets us closer to a precise account of how it spread, is to use machine learning and text classification techniques. Boiled down to its essentials, these techniques take two distinct corpora and compare them against one another based on a set of user specified features (e.g., the kinds of words that are used). Whatever the features, the assumption is that they manifest distinctly in each corpus. After identifying these corpora, they are labeled accordingly as belonging to one group or the other, like “spam” and “not-spam,” or “hokku” and
“not-hokku.” Using a random sample of half the texts from each corpus, the machine is trained to learn which features are more likely to be associated with which texts. So if your feature is defined by the words used in a text, as it is for us, then you end up with something like this (Fig. 9): probability measures for which words are more likely to be found in which corpus. These measures are then used to classify the other half of texts that have been held out, with the machine trying to predict the group to which each text belongs based on its training.

In our case, the two corpora we classify against each other are 1) a subset of our hokku corpus and 2) subsets of “short” poems taken from one of several key sites for poetry publication in this period: Poetry Magazine, Little Review, Contemporary Verse, and others. As for features, there are two that we can fairly easily operationalize, and which link back to what made the hokku a recognizable, and desirable, form to imitate. One is brevity, which we can select for by taking only those poems that are at least as short (as defined by character length) as the average length of our hokku texts, somewhere around 250 characters. The second feature is diction. Using a “bag-of-words” approach, we represent every text as the set of words by which it is composed, excluding function words, and then aggregate this feature over the entirety of each corpus. The idea here is that by identifying the words typically used in either translated hokku, or native English hokku, we can then test to see if other short poems from the time used these same words, and whether this might be a gauge of their hokku-ness. Ideally, diction will also help us to index the other qualities of the hokku that made it such an attractive meme for modernist poets: the presence of specific words tied to Orientalist imagery; and conversely, the absence of words that might otherwise dilute a poem’s “suggestiveness.”

Knowing what we do about each of the historical phases of hokku, we decided to structure our tests in two ways. First, take the pre-1914 hokku, almost all of which are translated
texts, and classify against short poems from the teens and early twenties. Second, take all the post-1914 hokku, mostly adaptations, and classify against the same body of short poems. The first test tells us whether the circumscribed vocabulary of pre-1914 hokku carried through to later English hokku as a trace of imitative desire. The second test tells us if the vocabulary of English hokku were similarly circumscribed, or whether experimentation and assimilation led to a corresponding lack of coherency in its linguistic code. Somewhere in-between these thresholds, we suspect, resides the hokku meme.

So what kind of results did these tests give us? One of the baseline measures that machine learning provides is an accuracy score, which is determined by the number of texts the algorithm guesses correctly. The accuracy scores here (Fig. 10) are averages for multiple classification tests run in a variety of ways: the pre-1914 hokku against Poetry Magazine and the other journals you see here; and then the same for post-1914 hokku. You’ll notice that the accuracy rates don’t vary all that much. They’re a little higher for pre-1914 hokku than for post-1914 hokku, and a little higher for Poetry than for Little Review and Contemporary Verse, at least in the post-1914 test. One thing the results suggest is that pre-1914 hokku are slightly more distinct in their word patterns than post-1914 hokku, and thus easier to identify. The results also point to some minor variation in the kinds of short poems being published in each journal, as we would expect. But the results also alert us to a problem. If we’re expecting to find hokku in these bodies of short poems, and yet training the machine to learn all of them as “not-hokku,” aren’t we confounding the classification process? Our accuracy scores may be lower overall, that is, because the corpora we’re comparing aren’t entirely distinct to begin with.

Now we could go into our training set and carefully try to weed out any hokku-like poems, although this approach presents its own problems. And high accuracy may not be all that
desirable, since we’re looking for where the corpora blend into each other. Indeed, things get particularly interesting when we look at the lists of misclassified poems. In the first scenario (pre-1914 hokku against a decade of Poetry), there were 14 texts from Poetry misclassified as more likely to be hokku. A couple texts were exactly what we’d hoped to find (Fig. 11). These include Amy Lowell’s “One of the Hundred Views of Fuji,” from her 1917 Lacquer Prints series: “Being thirsty, I filled a cup with water, And, behold!-Fuji-yama lay upon the water, Like a dropped leaf!” Others were not what we hoped to find, like this aphoristic snippet from 1921: “Meekness and Pride / Are fruits of one tree; / Eat of them both / For mastery: Take one of Pride / Of the other, three.” And then there were those that fell somewhere in-between: “It was an icy day. We buried the cat, / Then took her box / And set match to it / In the back yard. Those fleas that escaped / Earth and fire / Died by the cold.” Here, obviously, is where close-reading re-enters the picture. The machine has discovered this poem for us, likely owing to the presence of words like “icy,” “cold,” and (perhaps) “died.” But now we’re left to decide if this is evidence of the “parasitical inter-imitativeness” that Riding and Graves were so very concerned about. Does it embody the suggestiveness that so many poets and critics saw as emblematic of the haiku form? Does it indicate qualities of being “short, concise, [and] full of direct feeling for nature,” which is how John Gould Fletcher summed up the hokku’s contribution to Imagism? Would readers at the time have recognized this poem as hokku-like? Finally, should we be persuaded of its participation in the haiku craze when we learn that it was written by W.C. Williams in 1919?

These are all sticky questions. But what’s most promising to us about a computational approach is that it discovers potential hokku based on patterns of correspondence derived from hundreds of texts. Surely the features we’ve chosen make some of these hokku harder to see, as diction is privileged over other meaningful formal qualities. Yet the fact that we’re finding the
poems we do, and just as successfully with the post-1914 *hokku* corpus, is encouraging. Here are a few more to consider (Fig. 12). What we hope to do with these potential candidates is expose them in our network maps, thus providing a rough plot of how the *hokku* diffused through channels other than those conventionally assumed by current scholarship of so-called Modernist Orientalism. Additionally, we think they help to represent a richer spectrum of imitative practices, from the sincere copying of an idea or formal innovation to less obvious kinds of correspondence—imitation as parody, as domestication, as the generative encoding of a kind of *Orientalisme*. Where do the boundaries of a form begin and end as it spreads through different individuals, different media sites and literary communities, and different nations? How do these macro-scale patterns of movement generate literary fields? We believe that computation can make these boundaries and patterns measurable in ways that provoke a more systematic and verifiable reading of form across its many sites of reproduction and varied patterns of mutation. The desire to track form in this way is not new, as the work of Riding and Graves can attest. Yet if they simply felt the *hokku* to be in the air, a kind of “germ,” as they called it, to which poets were susceptible, we can now diagnose more precisely the source of their fears, which is also to enhance the model of influence they presuppose—one inherently social, systemic, and diffuse in its formulation.