

Conferences & Остраннение

Shortchanging *Topos* and Ourselves

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Sad Girl of Montréal

*Habitualization devours work, clothes,
furniture, one's wife, and the fear of war.*

—“*Art as Technique*”

Viktor Shklovsky
1917

Abstract

What is a conference for? What are its design considerations? What are the trade-offs between virtual and *terrestrial* meetings? Within these larger frame questions, this essay looks *only* at the following argument:

The first critical step in research is the hypothesis—the novel idea to be explored. This step typically requires the mysterious phenomena of an intuitive leap of mind. Fertile soil for that leap is one of the most valuable affordances a conference can provide. Potential generative power lies within *topos* (place) and *остраннение* (estrangement). They have been overlooked in discussions about conference design of all types. Cutting access to these deeper physical and intellectual roots reduces our ability to think new thoughts.

Put them back in.

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...in this room there is stillness, and the stillness has gone tense. The room is waiting for something to happen. I could light the fire, but my friend forgot to leave me any logs. I could turn on a lamp, but there is no animal feeling in electricity. I stand up again and walk over to the phonograph and switch it on without changing the record that I played this morning. The music strengthens and moves about, catching the pictures, the books, and the discolored white marble mantelpiece as firelight might have done. Now the place is no longer a cave but a room with walls that listen in peace.

—Howard's Apartment
“The Long-Winded Lady”
Maev Brennan
November 11, 1967

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Krampnitz



Now—2022—is a particularly apt time to reinvent the academic computer science conference. In 2020, conferences stopped meeting in person and began meeting online. Clearly there have been gains, even though (as far as we know) those gains have not been definitively measured and coalesced—gains such as budgetary savings, reduced travel, a smaller carbon footprint, and the side-effects of increased attendance, especially by students and researchers from far-flung parts of the world and those for whom travel is difficult, too expensive, or even impossible for political or medical reasons. We give these gains their well-deserved nod of acknowledgement but in this essay we are passing them by: they are not part of our topic.

Taking as baselines the Association for Computing Machinery’s (ACM) Presidential Task Force report on how to organize online conferences [19] and our own experiences with an extreme example, we claim that some conference essentials generated by place and place-based activities have been left out: these essentials are our topic.

We speak here of the mysteries of reasoning by abduction and the mysteries of ourselves as simian creatures with our evolutionary toes in the mud of the physical earth. The productive depths of *dislocation, isolation, confrontation, and incubation*—which only place can provide—as well as the subtleties, complexities, and varieties of place-based interactions are investigated. Frankly, as modern bagel-eating espresso-gulping junkies glued to our screens, we have forgotten ourselves. We have failed to *notice*...



To copy others is necessary, but to copy oneself is pathetic.
–Picasso





Figure 1. Central Illinois



Imagine

YOU PACK A SMALL BAG: khakis and jeans, sweater, t-shirts, socks. And a computer bag with cables, phone, a bunch of the small gifts you’ve been asked to bring, and the papers in your group; red Converse sneakers are on your feet. It takes three flights to reach Willard Airport in Savoy, Illinois—landing, the plane flies in low over big cornfields. The University of Illinois maintains conference facilities at a place called Allerton Park. A volunteer corrals you with the others who will shuttle with you to Allerton.

The drive out there takes forever—across nothing. Nothing. (Figure 1) It’s flat farmland—flat to every horizon line, wind sweeping across with hardly a hindrance. Sky filling every sightline so that even this autumn day harbors a tickling dread. From the side window it feels like being in the fields. The roads align on a grid; the towns at grid intersections. The place names are strange: Farmer City, Rantoul, Lake of the Woods, Philo, Tolono, White Heath, Tuscola,

Mahomet, Arcola, Olney (“Home of the White Squirrels”), Mattoon, Pesotum—even a Foosland.

Along the road are signs of a different kind of place. Seed signs—of all types. (Figures 2&3)



Allerton Mansion

No personal car; you’re stuck here for four days and four nights in this emptiness of nowhere. You begin to regret the decision to come. You’re not presenting a paper,



Figure 2. Seeds



Figure 3. Other Seeds

that’s not the point. You’ve submitted a draft—a “work-in-progress” they called it—and you were assigned a *shepherd* who helped you revise it; *then* the program committee looked at it. Backwards. Your paper has been a bitch actually, you feel like you’ve been spinning your wheels. You’ve also been sent other drafts with instructions to read them and prepare for discussion. You haven’t done it, figuring you can get away with a quick sideways glance at some point.

Suddenly the prairie ends and you’re in the woods. A small road takes you into Allerton Park (Appendix A) and then to the Mansion. You load out, head inside, check in, get your room number.

You head to your room. Up the grand staircase and down a long hall that squeaks every step. The room is big, and it’s not the Holiday Inn. You stand there. Just standing still. The big room, the crocheted bedspread, the bay window looking over a pond to a field, the light soft and calming. You relax. You like the room. You watch the oak leaves glisten.

You go down and read your email in the Gallery (Figure 4)—a place the conference chair said was a place to hang. You hadn’t signed up for the Bootcamp,¹ but the Newcomer’s Introduction in the library (Figure 5) tells you the structure of the week. First up, games (Figure 6). You’d heard of corporate “icebreaker” games and thought them silly. These games are led by a nerd with a German accent. There’s a big parachute. You crawl under it as instructed, fall flat. You and some others laugh at the goofiness; you have mud on your sweater—the only one you brought. Then tennis balls bouncing on the parachute while everyone around it holds its edge and flails the edge up and down. Then a game to learn peoples’ names, and finally a Rain game to

simulate a rain storm coming up then passing. Will anything serious ever happen?

⋮

What kind of conference is this?

⋮

Why are we *here*?



Sleeping Room



Manure Spreader

¹Bootcamp is a training day for newcomers to the conference, held the day before the conference starts.



Papa Del's Pizza

They said the pizzas would arrive at 6:30pm; they miss by an hour. Twenty Papa Del's deep dish pizzas. These pizzas are no joke. Two slices are a little too much. Most of the first-time attendees have never before seen pizza like this. There's beer, wine, sodas—that and the pizzas are served in the Solarium, a sort-of patio with a wall of doors and windows opening out to the pond and field beyond.

Off to bed. The program says breakfast is from 7:30 to 8:30 in the morning. It's mid-September and you leave some windows open and the air conditioner off. Every few minutes the world outside jumps silently, splashed with a flickering light, clouds illuminated from above, singular trees in snapshot: it is heat lightning at prairie's edge.



Former Stables & Current Dining Room

Morning and you walk down the grand staircase, down the hall, and into the former stables where a buffet line awaits. Grits, eggs over hard, sausage, bacon, flapjacks, cereal, biscuits & gravy, coffee, tea (in bags), and orange juice. All your meals will be here, including a banquet-style dinner on the

last night of the conference. The table you choose is welcoming and talk is about the work and what people do. Some of these people will be in your workshop.

Your group is assigned to the Butternut Room (Figure 7), a realm of books, warm wood, soft lights, a view to woodlands and the big field. You head for the leather couch beneath the windows; it's soft from years of use. Sitting next to you is the German you don't yet know at all, and, on the other side, a Swede from the parachute game. The last ones in have to drag a few chairs from the adjoining room. The facilitator goes over the writers' workshop method: *a writers' workshop*. Hmm. The author, whose paper is under discussion, must say nothing at all, remaining, like a fly on the wall, silent to listen attentively to the comments of those who have read and reflected on his draft. Now you see why reading and marking drafts beforehand is important.

Welcome to the *Pattern Languages of Programs Conference—PLoP*.



"Is there any point to which you would wish to draw my attention?"

"To the curious incident of the dog in the night-time."

"The dog did nothing in the night-time."

"That was the curious incident," remarked Sherlock Holmes.

—Silver Blaze, Arthur Conan Doyle

THE HALLMARK OF THE CREATIVE DETECTIVE is *abductive reasoning*. Sherlock Holmes notices that the dog did not bark in the night. Through a logical leap of his mind comes the possibility that the dog might have known, and known quite well, whoever broke into the stables that night. A working hypothesis is born.

Abduction has nothing to do with deductive reasoning which takes our thoughts from the general to the specific. [Functional languages are cool. Scheme is a functional language. Therefore, Scheme is cool.]

Abduction has nothing to do with inductive inferences which go in the opposite direction from specific observations to a possible generalization. [Guy L. Steele Jr. is a computer scientist and loves Common Lisp. Richard P. Gabriel is a computer scientist and loves Common Lisp. Didier Verna is a computer scientist and loves Common Lisp. A possible generalization: computer scientists love Common Lisp.]

Traditional logical induction and deduction are closed with regard to prior assumptions and data: they cannot produce new ideas. The philosopher Charles Sanders Peirce recognized that and coined the term "abduction" to explain the form of reasoning that leads to new ideas. Informally, such an inference leads from an observation of a situation that is not yet understood to a hypothesis that, if true, explains the observed phenomenon.



Figure 4. Gallery: A Place to Meet, Read, Snack



Figure 5. Library: The Plenary Room



Figure 6. A Game Using a Parachute

Now, that the matter of no new truth can come from induction or from deduction, we have seen. It can only come from abduction; and abduction is, after all, nothing but guessing. We are therefore bound to hope that, although the possible explanations of our facts may be strictly innumerable, yet our mind will be able, in some finite number of guesses, to guess the sole true explanation of them. That we are bound to assume, independently of any evidence that it is true. Animated by that hope, we are to proceed to the construction of a hypothesis. [20]

Richard Feynman says abduction—guessing—is the fundamental method of scientific discovery.

In general, we look for a new law by the following process. First we guess it. Then we compute the consequences of the guess to see what would be implied if this law that we guessed is right. [8]

Abduction is a guess to the best explanation.



Imagine

YOU'RE UP EARLY THE NEXT MORNING for a slow long walk. You like solitude, a pause, the timeout, space and time to clear your mind, to play back recent events and thoughts that came in the night. Allerton's grounds welcome long wanderings, both physical and mental. You head out to the north and happen on a vine-lined walkway; following it you stumble into the *Fu Dog Garden* (Figures 8&9)—two rows of eleven blue ceramic Chinese Fu Dog sculptures which line up with the *House of the Golden Buddhas* (Figure 10).

Turning southwest you pass a gate house, the *Girl With a Scarf* sculpture (Figure 11), a sculpture of Adam (Figure 12), the *Chinese Maze Garden* (Figure 13), and the *Avenue of the Chinese Musicians* (Figure 14).

You stop here to look at the different musicians and their instruments. It is such a strange place. Weird, almost uncanny. This isn't a standard conference venue—it's not a convention center, a set of university classrooms (though it is part of a university), you're not staying at a Marriott or Hyatt, nor even the Pan Pacific in Vancouver.

You check your watch and there is time before breakfast.



Figure 7. Butternut Room & Writers’ Workshop



Figure 8. Fu Dog Garden



Figure 9. Fu Dog

Next you pass down and across the *Sunken Garden* (Figure 15). The Mansion has long disappeared from sight. The silence is eerie. No bird song. Your leg muscles are liking it; releasing the last tensions of the trip and the office.

After a good long stretch it gets frankly weird—the *Death of the Last Centaur* (Figure 18). This statue is far from everything, in a small clearing in a black walnut woodland.

The statue is not beautiful. It’s disturbing. The walnut trees have a peculiar scent. Some more wandering and you find the grand statue, the *Sun Singer* (Figures 16&17).



Figure 10. Temple of the Golden Buddhas

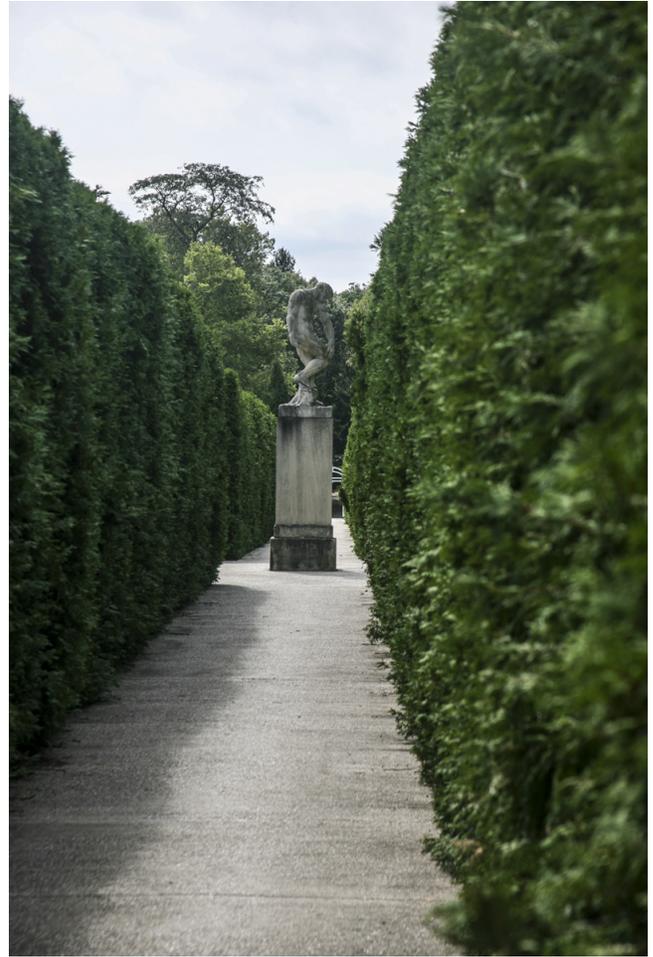


Figure 12. Adam



Figure 11. Girl with a Scarf



Figure 13. Chinese Maze Garden



Figure 14. Avenue of the Chinese Musicians



Figure 15. Sunken Garden



THE CORE OF PLoP² CONFERENCES is the *writers' workshop*—along with a few plenary talks, focus groups, games, and other rituals. A writers' workshop is a small group doing a *close reading* of each other's works in progress. A close reading is the practice of looking at what the words on the page

²PloP—*Pattern Languages of Programs*—was originally a conference about software-related and design patterns, but has branched out to include almost any sort of patterns and pattern languages. It was founded in 1994 and has been held every year since then; since 2006 its proceedings have been published in the ACM Digital Library. There is an associated Springer journal, *LNCS Transactions on Pattern Languages of Programming* (TLoP). The Hillside Group, a US nonprofit, sponsors PLoP. In 1996, Hillside Europe was created as a sister organization in Europe, and EuroPloP has been held every year since 1996 at Kloster Irsee in Bavaria, Germany; since 2010 its proceedings have been published in the ACM Digital Library. AsianPloP has been held every year since 2014 in Asia. SugarLoafPloP has been held in South America every other year since 2014. ChiliPloP was held every year from 1998 through 2011 in Arizona and in 2012 in New Mexico. Six other named PLoP conferences have been held occasionally since 1998.

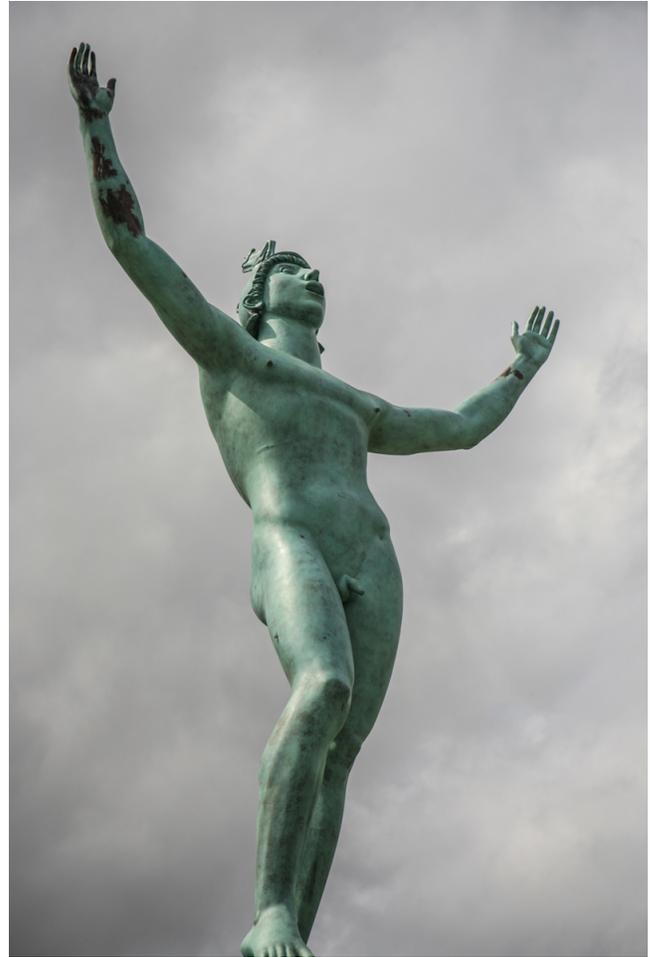


Figure 16. Sun Singer

are saying and how they say it rather than at the intentions of the author. The primary purpose of a writers' workshop is to improve a work in progress, and a secondary purpose is to teach members of the workshop how to work with their writings. The process, taking roughly an hour, is the same for each author.

Each piece is handed out weeks in advance of the conference with time also provided during the conference to refresh one's memory. The group forms into a circle. An experienced *moderator* is responsible for keeping the workshop on track, and in the best case, is also a teacher who directs the group to provide the best feedback and instructs the group on writing, presentation, pattern-language creation, and sometimes the domain of the paper. To begin a session, the author is asked to select and read aloud a short passage from their work, and the author may ask the group to focus on a particular concern. From this point until near the end of the session, the author does not speak; all conversation is directed toward the moderator. The moderator first asks the group to summarize the piece. In this section the only thing



Figure 17. Sun Singer

discussed is what the piece seems to be about and what the group members got from it. No criticism is allowed here: the idea is to get only a sense of how the piece was perceived. In technical writers' workshops the focus is more on the content than on the writing and presentation. Once the moderator determines that little new information is coming out, the group moves on to discuss what "worked" in the piece—what people liked or found effective. This is where positive comments are made. Once nothing new is being said, the group turns to improving the piece. The ideal situation is to present a fix along with the criticism. The teaching moderator can exercise significant flexibility in following these steps. A good moderator asks what David Whyte might call *beautiful questions*—a beautiful question provokes, disturbs, or suggests a different way of seeing [26]. Finally, the author is allowed to ask questions of the group—perhaps clearing up points that were made or asking about specific parts of the piece. The author is not allowed to defend the work. The group then thanks the author.



A WRITERS' WORKSHOP IS A WAY OF DOING SCIENCE.³ Science can be regarded as a certain kind of story told about reality. By looking back at the history of science we learn that science is a series of stories. At any given time there is typically an existing story which is being corrected and revised; Thomas Kuhn calls this "normal science" [14]. Every now and then the story is replaced by a newer one; Kuhn calls this a "scientific revolution."



But this is never done in a vacuum. It has to do with *topos*. Formally, "topos" is a term used in poetics and literary theory to mean a conventionalized expression that can be used as a resource for the composition of additional texts. An example from literature is the Garden of Eden. Anyone in a Western Judeo-Christian culture asked to tell a story about

³Writers' workshops have been used in several purely computer-science workshops in which non-author attendees observe the workshop to absorb the results while the authors are engaged in a peer-review process to get their papers (and ideas) in shape for publication.

the Garden of Eden would likely come up with a story that was consistent with the vision or image of creation the Garden of Eden presents.

Every scientific theory is a sort of topos. One good example is the caloric theory of heat, which held that heat consists of a fluid called “caloric,” a weightless gas that can pass in and out of pores in solids and liquids and that flows from hotter to colder bodies. The amount of caloric in the universe is constant, a sort of conservation that thermodynamics also recognizes. A cup of hot coffee cools because caloric is self-repelling. When caloric enters the air, it combines with its molecules, increasing its volume. Caloric can explain heat radiation and phase changes (ice, water, steam, for example); most of the gas laws can be derived. When Laplace corrected Newton’s pulse equation with a constant to take caloric into account (when Laplace retold the pulse equation using caloric as a character), the equation was better able to predict the speed of sound, and as this constant was refined under the caloric theory, even more precise predictions for the speed of sound were made for over a century. The caloric theory was replaced, generally, by thermodynamics, but one of the practical stories woven from this topos of the caloric is the steam engine. Steam engines still work.

Richard Feynman in one of his lectures talks about how scientists guess new theories by using framings. He said “every theoretical physicist that’s any good knows six or seven different theoretical representations for exactly the same physics, and knows that they’re all equivalent, and that nobody’s ever going to be able to decide which one is right at that level. But he keeps them in his head, hoping that they’ll give him different ideas for guessing” [7]. Each such framing is a topos.

In a workshop, sometimes we’re simply helping an author clarify a thought or improve how to express that thought. Sometimes we’re improving a normal science story. Once in a while a brand-new thought—out of abduction—emerges. It’s a question of setting the stage as mindfully as possible. An insightful beautiful question, the degree of trust built up over days, the dedicated in-depth focus, the sparking of ideas from one mind to the next, all these things contribute to fertile ground for abductive thinking.



Remember that “topos” (τόπος) means *place* in Greek; the concept of topos informs us that place has a generative effect on people and their stories. This place—Allerton Park—has its own story, its own history, but also its own peculiar history with respect to this conference. The PLoP conference was originally about applying Christopher Alexander’s work [1] to software development. It was designed to be held at Allerton Park: this place was an active co-designer [10].

Just look through the photographs and think of his patterns from “A Pattern Language,” and ask yourself what these physical surrounds actively invite us to do:

Network Of Learning, Promenade, Small Services Without Red Tape, South Facing Outdoors, Wings Of Light, Connected Buildings, Half Hidden Garden, Path Shape, Activity Pockets, Indoor Sunlight, The Flow Through Rooms, Tapestry Of Light And Dark, Communal Eating, Small Meeting Rooms, Light On Two Sides, Garden Wall, Window Place, Ceiling Height Variety, Good Material [1]

On one hand Allerton protects the conference. It protects through buffering—it’s completely ours for the duration of our stay. Bodily and mentally, we occupy, stretch out, group, disband, linger. These patterns provide deep physical and psychological comfort. We are, after all, creatures of flesh and bone with natural orientations within space and time. These orientations are how we sense—really and metaphorically—what is within reach, important, imminent, or distant.

On the other hand, Allerton disrupts, dislocates, confronts. The isolation, the weirdness of some of the art. *Defamiliarization* announces itself as another and very different creative generative power.



DEFAMILIARIZATION OR ОСТРАННЕНИЕ (estrangement or ostrannenie [aw-stráh-nuh-nee]) is a literary a technique that forces the reader to look at the material in the piece and the world in new ways. Остраннение puts the world in doubt, threatening the congruity of one’s reality model, of the abstractions tucked sleepily away in the niches of our minds.

Viktor Shklovsky in “Art as Technique” [24] was one of the first to describe ostrannenie; it is a staple of Russian Formalism and 20th- and 21st-century literature. “Defamiliarization” is a less defamiliarized word meaning ostrannenie.⁴ Shklovsky argues that people are subject to “automatism of perception”: being so accustomed to things in the world—and especially abstractions of them—that we are in the habit of ignoring them.

Habitualization devours work, clothes, furniture, one’s wife, and the fear of war. “If the whole complex lives of many people go on unconsciously, then such lives are as if they had never been.” And art exists that one may recover the sensation of life; it exists to make one feel things, to make the stone stony. The purpose of art is to impart the sensation

⁴Shklovsky introduced the term “ostrannenie” which is not correct Russian—it should be “ostrannenie.” In 1983 in “Theory of Prose” [25] he clarified (as translated): “And then I coined the term *ostraneniye*; as nowadays I can admit to having made spelling mistakes, I wrote it with only one *n*. I should have written down *strannyi* first. And so off it went and has been roaming the world ever since, like a dog with a torn ear.”



Figure 18. Death of the Last Centaur

of things as they are perceived and not as they are known. The technique of art is to make objects “unfamiliar,” to make forms difficult, to increase the difficulty and length of perception because the process of perception is an aesthetic end in itself and must be prolonged. Art is a way of experiencing the artfulness of an object: the object is not important. . . . [24]

The notion of defamiliarization in literature is as old as Aristotle. In “The Poetics,” section 22, Aristotle wrote:

The perfection of Diction is for it to be clear and not mean.⁵ The clearest indeed is that made up of ordinary words for things, but it is mean. . . . On the other hand diction becomes distinguished and non-prosaic by the use of unfamiliar terms, i.e. strange words, metaphors, lengthened forms, and everything that deviates from the ordinary modes of speech. [3]

Shklovsky continues:

⁵The sense of “mean” here is as follows: lacking distinction or eminence, humble; lacking in mental discrimination, dull; of poor, shabby, or inferior quality or status; worthy of little regard, contemptible.

After we see an object several times, we begin to recognize it. The object is in front of us and we know about it, but we do not see it—hence we cannot say anything significant about it. Art removes objects from the automatism of perception in several ways. Here I want to illustrate a way used repeatedly by Leo Tolstoy, . . .

Tolstoy makes the familiar seem strange by not naming the familiar object. He describes an object as if he were seeing it for the first time, an event as if it were happening for the first time. In describing something he avoids the accepted names of its parts and instead names corresponding parts of other objects. For example, in “Shame” Tolstoy “defamiliarizes” the idea of flogging in this way: “to strip people who have broken the law, to hurl them to the floor, and “to rap on their bottoms with switches,” and, after a few lines, “to lash about on the naked buttocks.” [24]

We claim that defamiliarization is essential to the creative process itself (in both art and science), and we characterize

it as a mechanism to invite—or more accurately, to force—the individual to explore / think / notice more deeply and widely. We argue that defamiliarization improves the ability to guess effectively, and that both artists and scientists deliberately provoke defamiliarizations, wittingly or not.



Imagine

NO ONE TOLD YOU about the art school.



The PLoP Art School in the Dining Room



DO ARTISTS AND SCIENTISTS deliberately provoke defamiliarization as part of their creative process? Quite oddly, most discussions of *остраннение* and the uncanny [9, 23] speak only of the resulting defamiliarizing artifacts an artist makes: the story, the novel, the play, the painting. But how is this accomplished? A defamiliarizing world—let's speak only of fiction for the moment—is defamiliarizing to the reader, but a writer has created it: Was that world defamiliarizing to the writer? And was that defamiliarizing part of the creative process?

Extreme forms of provoked defamiliarization are found in older genres such as dadaism, surrealism, and absurdism, along with newer ones like *flarf* [12], which appeared in the early 21st century. These reject logic and reason, instead embracing nonsense, irrationality, surprise, unexpected juxtapositions, non sequiturs, and the unnerving.

However, is defamiliarization part of the creative process for ordinary stories?

Robert Boswell is a fiction writer and teacher. His book of essays “The Half-Known World: On Writing Fiction” [4] is one of the clearest descriptions of using defamiliarization for creating art, but even he is a little elusive. He is talking about defamiliarization and *topos*, but does not have that vocabulary. He writes that the most common failed story...

... is the story written by a writer who simply knows too much about the reality that the story wishes to portray; he understands his characters and their motivations too clearly, too logically, and too early; he has researched the material too categorically and completely; he comprehends where the story is going too correctly. . . . [T]hese novels ignore the unexplainable, the quirky, the unconscious—the human slippage that makes people large and contradictory and fascinating. [4]

Boswell writes that at least in a fictional world, “a fully known world is devoid of mystery” and “when the reader’s experience of a story results in a world that is too fully known, the story fails.” How to avoid this? Boswell writes:

... For as long as I can, I remain purposefully blind to the machinery of the story and only partially cognizant of the world my story creates. I work from a kind of half-knowledge. . . . By refusing to fully know the world, I hope to discover unusual formations in the landscape, and strange desires in the characters. By declining to analyze the story, I hope to keep it open to surprise. Each new draft revises the world but does not explain or define it. I work through many drafts, progressively abandoning the familiar. What I can see is always dwarfed by what I cannot know. What the characters come to understand never surpasses that which they cannot grasp. The world remains half-known. [4]

Boswell discusses a strategy he uses of imagining an *alternate universe* with strange, contradictory, or even “backwards” characteristics, a universe that exists alongside the ordinary real one. His characters move between them seamlessly and without remark, creating “moments when the utterly ordinary takes on a measure of strangeness.” Such an alternate universe is actually a *topos*.

These techniques defamiliarize the writer.



What about scientists? Do they provoke defamiliarization, perhaps using a *topos*? Feynman told the story of Maxwell’s equations and a defamiliarization involving idle wheels and gears:

Maxwell . . . obtained the laws of electricity and magnetism. . . . He put together all the laws of electricity, due to Faraday and other people who came before him. And he looked at them, and he realized that they were mutually inconsistent. They were mathematically inconsistent.

In order to straighten it out, he had to add one term to an equation. By the way, he did this by inventing a model for himself of idle wheels and gears and so on in space. And then he found . . . what the new law was.

And nobody paid much attention, because they didn't believe in the idle wheels. We don't believe in the idle wheels today. But the equations that he obtained were correct.

So the logic may be wrong, but the answer is all right. [7]



A *THREAT TO MEANING* is a special kind of defamiliarization. It occurs when a presented situation is not consistent with one's model of the world. An extreme reaction to a *threat to meaning* is that the individual might actually feel personally threatened or even alarmed. In an early experiment, Bruner and Postman report that a participant who was shown several times a Queen of Hearts playing card colored black instead of red responded "I can't make the suit out, whatever it is. It didn't even look like a card that time. I don't know what color it is now or whether it's a spade or heart. I'm not even sure now what a spade looks like! My God!" [6].

When a situation violates—or threatens—their models, people attempt to resolve the inconsistencies to restore a sense of meaning.

In this essay we are investigating the relationship between defamiliarization and openness to novel ideas. To illustrate how deep this goes we turn to research by Proulx and Heine, "Connections From Kafka: Exposure to Meaning Threats Improves Implicit Learning of an Artificial Grammar"⁶ [21]. Proulx and Heine report two experiments that strongly suggest that a threat to meaning—a defamiliarization—can improve learning and, possibly, increase our chances of abductive insights. There were two experiments because the researchers were so surprised by the results of the first experiment, they devised the second.

The essence of both experiments was to determine whether a *threat to meaning* would improve performance in an artificial learning test. Their hypothesis was that people respond and adapt to an experience that contradicts part of their model of the world—an *anomaly*—by one of the following methods: reinterpret the anomaly so that it corresponds to the model (that is, perform normal science as described by Kuhn [14]); revise that part of the model and replace it (Kuhnian revolution); reaffirm an unrelated part of the model; or, essentially, become more alert to the world around them, perhaps by noticing or learning new things, such as patterns.

The Proulx and Heine experiment was to ask the participants to perform a learning task after being exposed to either a threat to meaning or a non-threat to meaning. Here is an outline of the first of the two experiments:

Participants were broken into two groups. One group was asked to read an absurd story called "The Country Dentist" adapted directly from "The Country Doctor" by Franz Kafka [13] (the threat to meaning); the other was asked to read a straightforward version of the same story (the non-threat to meaning).

These stories as presented to the participants are reproduced in Appendix B. We invite you to read them now.

After that, all the participants were shown a sequence of 45 strings, one at a time, produced by a (hidden) finite state machine, each string being 6–9 characters long; they were asked to copy down each string as it was shown. Here are the first 10:

XXRRTTVM	VTTVTM
XXRRTTVM	XXRTTTTVM
VTVTRVM	VVTRVTM
VVTRVM	XXMRVTM
XMMXRTTVM	VTTTTVTM

After all 45 were thus presented, the participants were told these instructions for the next step:

The strings of letters you just copied contained a strict pattern. Some of the letter strings below follow the same pattern. Some of these letter strings do not. Please place a check mark beside the letter strings you believe follow the same pattern as the letter strings you just copied. [21]

Then each participant was given a sheet of paper with the same 60 sequences of characters, each 6–9 characters long, half produced by the same finite state machine that produced the training strings (Grammar A, Figure 19) and the other half by a different finite state machine (Grammar B, Figure 20). Here are the first 10 lines:

- | | |
|-------------|--------------|
| 1. VVRMTM | 31. XXRTTVTM |
| 2. XXRRRM | 32. XMMMMXM |
| 3. VTRRRM | 33. XXXRRRRM |
| 4. XMMMXXM | 34. VVTRTVTM |
| 5. XMMXRVM | 35. VTTTVM |
| 6. XXRVTM | 36. XXRTVM |
| 7. VVRXRM | 37. VVRMTRRM |
| 8. XMVRXRM | 38. XMTRRM |
| 9. XMVRXM | 39. VVTRXM |
| 10. XXRTVTM | 40. XMXRVM |
| ⋮ | ⋮ |

Participants who read the absurd story more accurately identified Grammar A letter strings (Hits – FalseAlarms: M = 12.2, Std = 4.74) than did participants who read the straightforward story (M = 7.5, Std = 5.11). Participants who read the absurd story selected a higher total number of letter strings as being in Grammar A (Hits + FalseAlarms: M = 21.95, Std = 7.46) than did the other participants (M = 16.5, Std = 9.45).

⁶In 2010 Richard Gabriel discussed this work in a more general paper about defamiliarization, "Better Science through Art" [11].

Put another way, participants who read the absurd story identified 33% more test letter strings and were 63% more accurate than the participants who read the straightforward story.

Here is how Proulx and Heine recount the lessons:

The absurd story constituted a meaning threat for many participants, and these participants responded by perceiving the presence of patterns in their environment and by abstracting patterns of association from their environment. We suggest that two general conclusions can be drawn from these findings. First, the breakdown of expected associations presented in the absurd story appeared to motivate participants to seek out patterns of association in a novel environment. Despite being given no instructions to learn features of the letter strings during the training phase of the task, participants in the meaning-threat condition selected a higher total number of test letter strings as following the Grammar A pattern than did participants in the no meaning-threat condition. This suggests that the meaning threat enhanced motivation to perceive congruent patterns of association in the test letter strings. Second, and more remarkably, participants in the meaning-threat condition demonstrated greater accuracy in identifying the genuinely pattern-congruent letter strings among the test strings, which suggests that the cognitive mechanisms responsible for implicitly learning statistical regularities in a novel environment are enhanced by the presence of a meaning threat. [21]

Proulx and Heine were so surprised by this result that they devised a second experiment:

In the wake of these novel findings, we sought to replicate them using an alternative, unrelated meaning threat (i.e., arguing against one’s self-unity). [21]

Participants were broken into two groups, and each completed a three-page workbook. In the meaning-threat condition, the first page instructed them to describe a situation in which they had behaved in an outgoing manner. The second page instructed them to describe a situation in which they had behaved in a shy manner. The third page instructed them to use what they had described in the previous two pages as evidence to argue that they had two different selves inhabiting the same body. In the no-meaning-threat condition, the first two pages were the same, but the third page instructed participants to argue that, despite the behaviors they had reported in the previous two pages, they nevertheless remained a unified self.

Then they were given the same test as above.

Participants who argued against one’s self-unity more accurately identified Grammar A letter strings (Hits –

FalseAlarms: $M = 11.25$, $Std = 7.39$) than did participants who argued for one’s self-unity ($M = 6.6$, $Std = 6.73$). Participants in the meaning-threat condition selected a higher total number of letter strings as being in Grammar A (Hits + FalseAlarms: $M = 23.83$, $Std = 10.21$) than did the other participants ($M = 17.69$, $Std = 10.74$).

Put another way, participants who argued against one’s self-unity identified 35% more test letter strings and were 70% more accurate than the participants who argued for one’s self-unity.

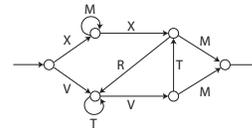


Figure 19. Grammar A

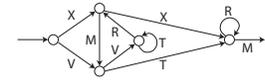


Figure 20. Grammar B

Proulx and Heine use the phrase “implicitly learning statistical regularities.” What is implicitly learned is the underlying pattern of strings that a formal grammar produces. We don’t assert that the finite state machine is learned in any direct way, but the improved intuitive apprehension of the pattern-ness is a good first step toward inferring the best explanation for the observed instances of the pattern. This suggests that defamiliarization can increase the cognitive mechanisms behind abduction and therefore behind generating new ideas and novel hypotheses. That is, defamiliarization can make a person better at the first steps in doing science: coming up with a hypothesis.



Another Workshop Room at Allerton

CAN WE DELIBERATELY PROVOKE defamiliarization and threats to meaning as part of conference design?

PLoP does it through writers’ workshops instead of presentations, each author estranged from the natural stance of argument and defense, each reader (strongly) invited to say

honestly their truth. All participants—like turtles with necks out—are maintained in vulnerability. Devised as an opportunity for beautiful questioning, it maximizes fertile ground for abduction. The risk, the processing time, the subtleties require face-to-face in a shared physical environment—a placeful place.

In the past, many computer-science conferences have experimented, albeit somewhat blindly, with off-topic keynotes, colocated conferences, or musical events that can be described as defamiliarizing, out-of-scope, or eye-opening. The *Sad Girl of Montréal* was an informal logo for OOPSLA 2007 in Montréal. She was graffiti on the Dairy Queen across from the conference hotel, and a cropped image of that graffiti was used to trigger the topos of the conference.



Sad Girl of Montréal Unbound

Even just the shock of vocabulary from a foreign language can be provocative enough to push a conference designer into a new thought.

The Japanese kanji for *person* combines the ideograms of *person* and *place/context*. If the Japanese wish to refer to the Western concept of the *individual*, they combine the ideograms of *person* and *item*. We tend to think of space as empty: a room is an empty box into which we (as separate items) enter or leave. Consider four distinct words about space in Japanese: *Wa*, *Ba*, *Ma*, and *Tokoro*, which deal with relationships between people, places, and activities. The Japanese are less inclined to separate space and time. Their vocabulary is more spatial-temporal [17, 18, 22].

Tokoro is a location along with an induced state of being. In Japan, *place* is indistinguishable from historical, cultural, social, and other connections contained within it. *Tokoro* is context. In Japan, a building can't be in Tokyo without Tokyo being in the building. *Tokoro* is also an abstract place or point: a particular moment in time or stage in a process; the critical or decisive moment; the verge or brink of (doing or being something); a stage or level at which a change of state occurs. “When (*tokoro*) I was about to [fall] [a]sleep,” “my skills have some weak *points* (*tokoro*),” “this is *where* (*tokoro*) my friend lives,” “I have earned my *position* (*tokoro*),”

“I was about to jump from the top of the Empire State building when (*tokoro*) my wife asked me not to” [2]. Being in or part of a place means being in a dynamic relationship with it. Allerton has a strong *tokoro*. Participants remember the conversations and the learning that took place there and that *there*—that context—is an integral part of those memories.

Ma means gap or interstice in space or time or space-time. It is an interruption or absence that helps reconcile differences. It is an emptiness glue between two dissimilar things that holds them together. *Ma* would be used to describe the shared focus that holds together the host and guest during a ceremony. *Ma* reflects that our experiences of space are time-structured processes and our experiences of time are space-structured. In Japanese, a spy is one who operates in the *Ma*, in-between established spaces or time; adultery is defined as love-making in the *Ma*. A fool is defined as someone who is oblivious to *Ma*. Design and aesthetic considerations invariably involve *Ma*: the pacing of a speech, the pauses in a conversation, the relationships between object and void in a flower arrangement or garden, the play between larger and smaller rooms, activities during a conference. The *Ma* at the Allerton conferences has been honed over the years: long gaps for reading papers and other activities; break times set by attendees and not support staff; intense investigation; the solitude of nature and long, exhausting walks that settle the mind; and out-of-the-way comfortable places to sit quietly or in small groups. All that is *Ma*.

Ba does not lend itself easily to translation. Ordinary translations into English include *space*, *place*, *gestalt*, *scene of a crime*, or *scene of a card game* (meaning the area where the cards are laid out). But *Ba* space isn't empty, and there's a dynamic interplay between person and location, and between persons. *Ba* is more of a shared and evolving energy field of interactions between people and place, which houses understanding, knowledge, wisdom, and relationships. In Allerton—in the womb-like Batternut room—a *Ba* forms. A shared mission. Everyone is working together to construct good papers, good stories, good science. Mutual respect. Good humor. All share that. It comes from the participants, from the method of working, and from the room itself. A *Ba* develops by accretion. The deep dish pizza with its conversations and the opening parachute game with its laughter both contribute to later conversations and the *Ba*.

Wa is a resultant of *Ba* and *Ma*. It is the consequent shared harmony that supports good human relationships. *Wa* emerges from work sessions, group activities, and the spaces in between.

Good conference locales exhibit strong *Wa*, *Ba*, and *Ma*; and they conjure a special sense of *tokoro*. Conference goers inhabit such places, and such places likely exude *остраннение*.

What we don't know (yet?) is how to build virtual places as fully living, healing, and inspiring as terrestrial ones.

concern for “carving out . . . mental space,” but that is about eliminating routine distractions and increasing intensity of attention. The truly creative thought is abductive and favored by what we have described in this essay: provocation by defamiliarization, threats to meaning, incubation, permission.

One of the largest sections of the Guide considers how to foster social interactions, stating that “informal, unstructured social interactions are one of the main reasons people travel to physical conferences.” The Guide discusses bringing attendees into various sorts of virtual rooms, based on deliberate criteria, random selection, stated interests, or algorithms. We don’t know how well it works.

There is a lot we don’t know.

How do we evaluate—or even go about evaluating—the 2020–2021 experience of forced virtualization? The quality of work produced? The savings in academic budget and carbon footprint? The dissemination of information and contact to a wider demographic?

How would we best evaluate the trade-offs to be made as we emerge from the pandemic?

How would we think through options such as hybrid conferences?



Death of the Last Centaur



Imagine

YOUR PAPER IS WORKSHOPPED. For the first few minutes your face turns the color of a copper beech, but then you start to really listen. People see things you knew you put in your paper, but they see other things too. A turn of argument you believed to be obvious threw several totally off track. As promised, the moderator pauses to teach about pattern construction or linking patterns, or he probes one reader’s half-thought, or he solicits the group for a bridge between thoughts. Slowly it dawns on you that your efforts at science reside a little less on a page of text and a little more in the groping forward of the conversation itself: the reader/listener is as much a partner in the story creation as you, the

writer/speaker. Science is not and cannot be a final draft. As you listen, new thoughts begin to crop up, you see how to connect your work with other research which could make for a larger more robust topos, and you can see how to eliminate some of your awkward phrasing. This is a gift that the group has given you.



The meals are sometimes bland midwest comfort food and sometimes inept stabs at faraway cuisines but are always convivial; the breaks are always ready; the art school and games are silly; you stumble upon the Gorilla; the Gallery and Solarium are often too loud. You move through the hours, the activities, the spaces, moments of quiet and disquiet, ease and unease, and your hard leather professional persona softens a bit. The other authors who appreciated your comments on their work give you one of the gifts they brought—a puzzle keychain, a FEUP pen, a Paris tin with one truffle, a card that says *Foosland Bar & Grill: Food & Bar*—and you give some of yours and plan to do better. Every night is a sleepful night.

On the way to the airport you pass the AgriGold signs and you think: yeah, agri-gold.



Home, you revise your paper. It’s published. You get another new idea.



Chinese Musician with Flute



LET’S REVIEW.

We looked at the necessary and timely reinvention of the well-worn academic conference.

We considered two powers—that of physical place and that of defamiliarization—which can help us sharpen our thoughts and arguments and, on a good day, nudge an intuitive abductive leap—glimpsing a clue, a new idea which enriches our research.

We suggested that the dislocation and disruption caused by attendance at a physical conference, in and of itself, can be a good thing. A break in routine, a strange bed in a strange room, different food, new faces, odd odors, unfamiliar culture, inconvenience; even the look of the sky—the light, the diffusion of it—can be unusual . . . and good. In

subtle and not so subtle ways the temporary relocation jolts us out of complacency, and hence, we are more alert.

We suggested that a carefully chosen location, such as Allerton Park, constitutes a topos—a story that can generate other stories, which in turn can generate further derivative stories. Even the use of place-based triggers such as the *Sad Girl of Montréal* as a conference logo can support recall of conversations.

We suggested that the duration, isolation, and incubation made possible by a physical conference gives an embryonic new idea the space-time to grab a tiny foothold for development.

We suggested that the strange and uncanny, even the somewhat threatening—a sunken garden, a statue of an imaginary creature, or a Kafka-esque story, even new vocabulary—makes us more receptive to new ideas or new interpretations of existing models. Techniques developed in the crafts of writing, music, and fine arts can be adopted and adapted.

We suggested that our intellects do well on a diet which alternates intake; feedback; quiet incubation; revisiting and deepening the same question; solitude; and company. We need rhythm: a mindful *Ma*.

We suggested that the paucity of the computer screen as a learning environment and the absence of natural and subtle physical orientation in a virtual conference leads to a dissipation of mental energies.

We suggested that there can be a creative synergy between the productive depths of place, techniques of deliberate estrangement, and a collegial method of in-depth discussion unattainable with other methods and contexts. We proposed that we already know the basic alchemy—the successful combinatory recipe. Although we are personally convinced, we have no quantifiable proof.

We examined closely a particular conference series designed with place in mind: *Pattern Languages of Programs*. It was designed specifically to be held at Allerton Park. Both the conference PLoP and the place Allerton Park are near the far end of their spectra. An “ordinary” conference can be held at a great location and still reap the benefits of place, and a great conference can be held at a lackluster location and still reap the benefits of a well-constructed gathering.

It does seem clear that now is a propitious time to seriously engage these questions. So that we at least know what we lose when we replace place with a placeless place.

I could light the fire, but my friend forgot to leave me any logs. I could turn on a lamp, but there is no animal feeling in electricity. I switch on the phonograph without changing the record that I played this morning. The music strengthens and moves about.

—Howard’s Apartment minus place
Maeve Brennan

A Allerton Park, Illinois

Allerton Park in Monticello, Illinois, is part of the University of Illinois. Allerton Park was largely created by Robert Allerton—industrialist heir, artist, art collector, and garden designer. His tastes were a bit odd. Allerton Park encompasses about 1500 acres of woodland and gardens. When I_(rpg) attended the University of Illinois from 1973–1975, I frequently visited Allerton. I gave my first technical talk there in 1974. Allerton Park is five miles from the center of Monticello, the closest town; it is 26 miles from Champaign.

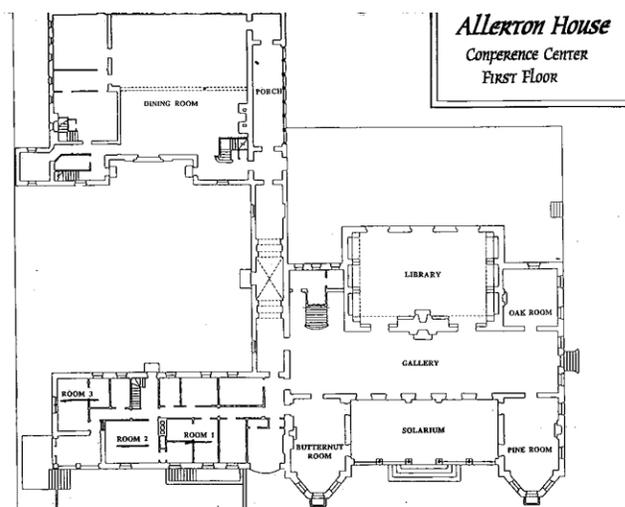


Figure 21. Allerton Mansion First Floor

Allerton Park is bisected by the Sangamon River. The manor or mansion (Photo on Page 3) is a 40-room (30,000 sq. ft.) home, originally called *The Farms* (Figure 21).

Construction of the house began on June 13, 1899, and was mostly finished about a year later. Construction of the supporting structures followed afterward: the stables, greenhouses, Gate House, and Brick Walled Garden. The style is Georgian-Revival.

Allerton Park presents quite a few peculiar circumstances to attendees of a Pattern Languages of Programs (PLoP) conference.

First the land: Allerton Park is a woodland park sitting in the middle of flat farmland (Figure 1).

Next the strangeness: Allerton Park has a maze, a sunken garden, fake ancient Greek ruins, a fake Roman arena, and nude / bizarre statues—many on forested trails along the Sangamon River. Statues range from the quaint (Fu dogs, Chinese musicians (Figure 14), koi) to the strange (*Death of the Last Centaur* (Figure 18), the *Sun Singer* (Figure 16)) to the weird (*Gorilla Carrying Off a Woman*, *Bear and Man of the Stone Age*—a bear death-hugging a hunter who had

stabbed the bear in the neck, the hunter still holding a rope attached to a bear cub).⁸

Allerton Mansion and surrounding buildings are where the attendees sleep in rooms that are more like rooms in a private home than like those in a hotel. The stables have been converted into a kitchen and dining room, and attendees take all their meals in that dining room. The meeting rooms are modestly sized with somewhat worn furniture and in some cases extensive bookshelves and good natural light; seating is on padded chairs, armchairs, and sofas. There is a medium-sized library where plenaries are held as well as some workshops (Figure 5). The nature of these rooms can be seen throughout the essay.

The grounds of Allerton Park contain a number of gardens: *Fu Dog Garden* (Figure 8), *Herb Garden*, *Brick Walled Garden*, *Triangle Parterre Garden*, *Peony Garden*, *Chinese Maze Garden*, *Annual Garden*, and *Sunken Garden* (Figure 15).



Bear and Man of the Stone Age (Gary Todd, public domain)

⁸These two bronze sculptures are by the French artist Emmanuel Frémiet (1824–1910), and were at times on display. Popularly called “Gorilla Carrying off a Woman” and “Bear and Man of the Stone Age” (formally, “Denicheur d’Ours”), they depict violent encounters between animals and Stone Age people. They are very popular with visitors who enjoy being surprised by finding them in the woods along the Orange Trail.



Gorilla Carrying Off a Woman (Gary Todd, public domain)



Bronze Statue

B Proulx / Heine Experiment: Country Dentist Stories

These are the two versions of the story used in the Proulx & Heine research. The illustrations were part of the versions given to test subjects. The stories are reproduced without corrections. **Warning:** Several of the illustrations are graphic. The stories begin on the next page. [Reproduced by permission from Travis Proulx.]

The Country Dentist, straightforward

I was becoming extremely worried. I had to set out to help a young boy who had a terrible toothache, but a morning snowstorm had made the roads surrounding my home nearly unpassable. To make matters worse, my horse had recently escaped from the barn, so while I had a sleigh, it wasn't going to be of any use.

The young boy with the toothache lived in a village several miles away, so there was no possibility of my walking there



in this weather. I had sent my housekeeper, Rose, into town to see if I could borrow someone's horse, but it didn't seem likely that anyone would lend me their horse in this terrible weather.

I paced and paced around the courtyard of my home, waiting for Rose to arrive with some news. It had begun snowing again, the wind was picking up, and night was falling. I began to feel like the situation was hopeless. In frustration, I kicked open the door of my home and cursed to myself.

I had just finished pulling off my boots when I heard Rose's voice calling from the courtyard. I ran outside and saw her standing at the gate holding a lantern and smiling excitedly. Standing behind her was the local postman, John Cheevers, who held the reigns of an enormous horse that he used to pull his mail cart. I couldn't believe our good fortune!

"You aren't going to get very far in your socks!" called Cheevers, and just then I realized that I had forgotten to



put my boots back on. We all laughed as Rose fetched them for me. Cheevers began to harness the horse to my sleigh and I began to bundle up for the trip. Even with a sturdy horse, this was going to be a long journey in the growing darkness and I had to make sure that I was prepared for the worst.

As Rose began packing the sleigh with supplies, I could not help but notice

both her and Cheevers stealing glances at one another in the dim lanternlight. I had suspected for some time that Rose was smitten with this young postman, and I imagined that it was no coincidence that she had gone to him for help in our hour of need.

When all of the supplies were packed and the horse harnessed, I climbed onto the sleigh and prepared to set

The Country Dentist, absurd

I was in great perplexity. I had to start on an urgent journey. A boy with a severe toothache was waiting for me in a village ten miles off and a thick blizzard of snow filled all the wide spaces between him and me. I had a carriage, a light carriage with big wheels, exactly right for our country roads. Muffled in furs, my bag of instruments in my hand, I was in my courtyard all ready for the journey, but there was no horse to be had, no horse.

My own horse had wandered away. My servant girl, Rose, was now running around the village trying to borrow a horse, but it was hopeless. I knew it, and I stood there forlornly, with the snow gathering more and more thickly upon me, more and more unable to move. In my gateway Rose appeared, alone, and waved the lantern. Of course, who would lend a horse at this time of night for such a journey?

I strode through my courtyard once more and I could see no way out. In my confused distress I kicked at the dilapidated door of my yearlong uninhabited pigsty. It flew open and flapped to and fro on its hinges. A steam and a smell of horses came from it. A dim stable lantern was swinging inside from a rope. A man, crouching on his behind in that low space, showed an open blue-eyed face.

"Shall I yoke up?" he asked, crawling out on all fours. I did not know what to say and merely stooped down to see what else was in the pigsty. My servant girl was standing beside me. "You never know what you're going to find in your own house," she said, and we both laughed.

"Hey there Brother, hey there Sister!" called the man, and two horses, enormous creatures with powerful flanks, one after the other, their legs tucked close to their bodies, each well-shaped head lowered like a camel's, by sheer strength of buttocking squeezed out through the low door which they filled entirely. But at once they were standing up, their legs long and their bodies steaming thickly. "Give him a hand," I said, and the willing girl hurried to help the groom with the harnessing.

Yet hardly was she beside him when the groom clipped hold of her and pushed his face against hers. She sighed and stepped into him; on her cheek was the trail of his tongue. "You brute," I yelled in fury, "do you want a whipping?" but in the same moment reflected that the man was a stranger, that I did not know where he came from, and that of his own free will he was helping me out when everyone else had failed me. As if he knew my thoughts he took no offence at my threat but still busied with the horses, only turning around once toward me.

"Get in," he said then, and indeed, everything was ready. A magnificent pair of horses, I observed, such as I had never sat behind, and I climbed in the carriage happily. "But I'll drive, you don't know the way," I said. "Of course," said he, "I'm not coming with you anyway, I'm staying with Rose." "You're coming with me," I said to the groom, "or I won't go, urgent

out. Cheevers began to climb onto the sleigh with me, but I waved him away. “You’ve done enough, John. Why don’t you take Rose into town and have a nice meal. It’s my treat.” I tried to hand Cheevers a few dollars, but he politely refused the money.

“Alright,” I said, “have it your way. Just make sure that you have her back in time to fix me my own dinner when I return.” Cheevers promised that he would, and Rose held his hand tightly in hers. “Gee up!” I cried, and the horse lurched forward.

By now the night was settling in, and the wind was howling through the trees. My lantern was barely able to penetrate the sea of blowing snow, and the road I was following was lost under a thick blanket of white. I followed the treeline as I made my way through the woods, though it seemed like I had traveled a long time without making a great deal of progress.

Though the horse was well-trained to pull heavy loads though winter storms, he was clearly laboring to make his way through this blizzard. The snow was nearly up to the horse’s knees, and it was falling even more heavily than when I had first begun my journey. I considered turning back and returning home, but I was not sure if I was closer to my destination or my own warm bed.



After what seemed like hours, I finally spied what appeared to be dim lights through the howling, swirling whiteness that surrounded me. Surely, I must have arrived at the village! As I drew nearer, I could make out the form of young woman holding a lantern and a small shack behind her that seemed nearly buried in snow. “Over here!” she yelled, and waved the lantern over her head to guide me.

The horse was by now exhausted, and a thick steam arose from his body as he shuddered to a stop in front of the shack. I slowly pulled myself from the sleigh and grabbed hold of my bag of dental tools and medical supplies. “It’s my son,” the woman cried, “he has a terrible toothache and he’s been moaning about it for days!”

I followed the woman into the shack and was surprised at what I saw. Despite the tiny confines of the room, an entire family greeted me with expectant, worried faces. There



were two small girls, the young woman and her husband, and what appeared to be a grandmother and grandfather, all huddled around a small boy lying in a small bed by the fireplace.

I hastily introduced myself as the dentist they had sent for, and asked if I could examine the boy. The family spent several moments

as my journey is. I’m not thinking of paying for it by handing my servant girl over to your lusts.”

“Gee up!” he said, clapped his hands, the horses started, my carriage whirled off,

I could just hear the sound of their hands on one another and I was deafened and blinded by a storming rush that steadily buffeted all my senses.

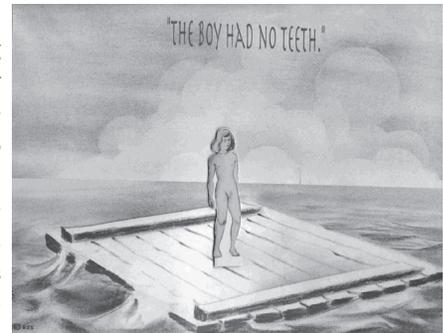
But this only for a moment, since, as if the boy’s farmyard had opened out just before my courtyard gate, I was already there, the horses had come quietly to a standstill, the blizzard had stopped, moonlight all around, the boy’s parents hurried out of the house, his sister behind them, I was almost lifted out of the carriage, from their confused speech I gathered not a word, in their house the air was almost unbreathable, a neglected stove was smoking, I wanted to push open a window but first I had to look at the boy.

The youngster heaved himself up from under the feather bedding, threw his arms around my neck, and whispered in my ear, “Pull my tooth.” I glanced around the room. No one had heard it. The parents were leaning forward in silence waiting for my verdict. The sister had set a chair for my handbag. I opened the bag and hunted among my instruments. The boy kept clutching at me from his bed to remind me of his entreaty. I picked up a pair of pliers, examined them in the candlelight, and laid them down again.

“Yes,” I thought blasphemously, “in cases like this the gods are helpful, send the missing horse, add to it a second because of the urgency, and to crown everything bestow even a groom—” And only now did I remember Rose again; what was I to do, how could I get to her, how could I pull her away from under that groom at ten miles’ distance, with a team of horses I couldn’t control?

These horses, now, they had somehow slipped their reins, pushed the windows open from the outside; I did not know how. Each of them had stuck a head in at a window and, quite unmoved by the startled cries of the family, stood eyeing the boy.

The mother stood by the boy’s bed and cajoled me toward it; I yielded, and, while one of the horses whinnied loudly to the ceiling, leaned my head to the boy’s face, which shiv-





staring at me in silence. Often, rural people are somewhat awestruck by doctors whom they treat with a kind of wonder, understanding that we are here to help, but not having any understanding of our knowledge or craft.

Finally, the mother motioned me silently towards the young boy, who appeared to be in terrible pain. His left cheek was swollen, and he let

out a low moan as I sat on a stool beside his bed. “Can you open your mouth?” I asked, and he shook his head ‘no.’ Very gently, I helped the boy ease open his clenched jaw, and what I saw confirmed what I had feared; his left molar was badly decayed.

“Is there anything you can do to fix the tooth?” the mother asked. I explained to her that the tooth was in too poor a condition and would need to be pulled at once. At this news, the family looked surprised and disappointed. I’m not sure what they were expecting I would be able to do for the boy, and it is possible that they had overestimated a dentist’s abilities.

“Pull the tooth?” cried the grandfather. “We could have done that ourselves, without wasting time and money on you coming out here!” Given the trouble I had gone to in making the trip to help this boy—without the expectation of payment—I was more than a little annoyed with the older man’s remarks, and made no effort to conceal my annoyance.

“Please, just do what you can,” said the mother. She put her hand on my shoulder and shot the older man an angry look. He sheepishly stepped away and reached into an old cloth sack. “I’ve been saving this for an emergency,” he said, and pulled out a bottle of brandy. “This should warm you up.” He handed me the bottle and I courteously took a swig of the liquor, which did make me feel a little better. This also seemed to put the family at ease.

I reached into my dental bag and went to work. Of course, things would have been easier if we had been in my office in town, but I was able to make do. With little difficulty I was able to remove the young boy’s rotten tooth, though not without great discomfort for the child. Unfortunately, that couldn’t be helped in these difficult circumstances, and I knew that he would soon be feeling much better.

The older man tried to hand me a few dollars, but I politely refused the sum of money which most likely represented their earnings for the week. Instead, I told them that they might do me a favor and allow me to spend the night rather than trying to return home in this snowstorm. They readily agreed, and I was soon was fast asleep, propped up on the stool leaning against in the boy’s bed.

By morning, the sky had cleared and it was safe for me to return. The family provided me with a hot bowl of porridge and a strong cup of coffee, and I was soon my way back home. By noon I had arrived back in my courtyard, and

ered under my wet beard. I confirmed what I already knew; the boy had no teeth.

Well, this should be the end of my visit, I had once more been called out needlessly, I was used to that, the whole district made my

life a torment with my night bell, but that I should have to lose Rose this time as well, the pretty girl who had lived in my house for years almost without my noticing her—so beautiful—that sacrifice was too much to ask, and I somehow had to get it reasoned out in my head with the help of what craft I could muster, in order not to let fly at this family, which with the best intentions in the world could not restore young Rose to me.

But as I shut my bag and put an arm out for my fur coat, the family meanwhile standing together, the father sniffing at the glass of sherry in his hand, the mother, apparently disappointed in me—why, what did these people expect?—biting her lips with tears in her eyes, the sister fluttering a towel, I was somehow ready to admit conditionally that the boy might have teeth after all.

I went toward him, he welcomed me smiling, as if I were bringing him a delicious candy—ah, now both horses were whinnying together. The noise, I suppose, was ordained

by heaven to assist my examination of the boy—and this time I discovered that the boy did indeed have teeth. In his right molar, near the back, was an open cavity, dark brown, in many variations of shade, dark in the hollows, lighter at the edges, softly granulated, open as a surface mine to the daylight. That was how it looked from a distance.

But on a closer inspection there was another complication. I could not help a low whistle of surprise. Worms were wriggling from their fastness in the interior of the cavity towards the light, with small white heads and many little legs.

The family was pleased; they saw me busying myself; the sister told the mother, the mother the father, the father told several guests who were coming in, through the moonlight at the open door, walking on tiptoe, keeping their balance with outstretched arms and singing, “Will you



after I led the horse into the barn, I entered my home and called out to Rose to let her know that I had arrived safely.

In place of a reply, there was a note on the kitchen table which read:

“Dear Dr. Gable, John has asked me to marry him and I have accepted. We have gone into town to find Reverend Jones. John feels bad that I will no longer be working for you, but he says that you can keep his horse.

Rose

PS. Sorry I forgot to leave your dinner before I left.”

I laughed and put the note into my pocket.

The End

pull his tooth?” That is what people are like in my district. Always expecting the impossible from the dentist.

Then my coat was off and I looked at the family quietly, my fingers in my beard and my head cocked to one side. I was altogether composed and equal to the situation and remained so, although it was no help to me, since they now took me by the head and feet and carried me to the boy’s bed. They laid me down in it next to the boy. Then they all left the room; the door was shut; the singing stopped; clouds covered the moon; the bedding was warm around me; the horses’ heads in the open windows wavered like shadows.

But now it was time for me to think of escaping. The horses were still standing faithfully in their places. My clothes, my fur coat, my bag were quickly collected; I didn’t want to waste time dressing; if the horses raced home as they had come, I should only be springing, as it were, out of this bed and into my own.

The End



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