

I Waded In Clear Water

Allison Parrish, WordHack VII
January 15th 2015

Today I'm presenting my computer-generated novel, *I Waded In Clear Water*. This novel was created for the 2014 National Novel Generation Month, which is an event run by Darius Kazemi each November in which participants are invited not to *write* a novel in a month, but to write, in one month, a *computer program* that generates a novel. For the purposes of the event, "novel" is defined loosely; The only requirement is that the resulting text have at least 50k words.

Today I'm going to read some selections from the novel, and intersperse that reading with some more information about the technical concepts of its implementation, and my aesthetic goals in creating it.

Ten Thousand Dreams

ConceptNet

Before I begin reading, here's some information just to set the stage. I used two source corpora to generate this novel. The first is Gustavus Hindman Miller's "Ten Thousand Dreams, Interpreted," published in 1901. The book includes a "dream dictionary" that tells you whether or not a particular happenstance or object that occurs in a dream portends good or ill.

The second source text is ConceptNet, a freely-available graph-based database of everyday basic knowledge, which is searchable with a web API.

Just a note: The novel has extensive footnotes; I'm going to read some but to skip over others.

Here are chapters 1 through 3.

Chapter 1

I saw a healthy belly¹. I was cursing myself. I saw chickens² going to roost. I roosted. I sent for a clergyman to preach a funeral sermon. I preached a funeral sermon. I saw them out of season. I was having trouble in dressing. I thought I was having trouble³ in dressing. I saw cars. I tried to enchant others. I enchanted others. I saw a jailer. I saw serpents⁴ crawling in the grass before me. I was in a life-boat.

I heard a minister exhort. I saw a dead monkey⁵. I heard my cry as if in pain⁶. I killed one. I was building a shelter⁷. I felt that any insect stings me.

I saw the ruler⁸ of my country undressed. I saw a vat. I was favoring any vice⁹. I drank vinegar¹⁰. I signed one.

¹The belly was both stupid and intelligent. A bellybutton was in it.

²A hen. They were in a fair, and this fair looked good. You found a cotton candy within.

³Your trouble was in a street. We found a person there. (This person was warm-blooded.)

⁴This serpent was slimy and unworthy.

⁵We found a marmoset there. They were seen in a treetop.

⁶A cottage was within our pain. (I saw them in an ass.) Bad. You said they were an ache.

⁷This shelter was in a house. Red. (A brownstone.) My brownstone did not appear big.

⁸My ruler was straight, and we saw them in an office. (I found a telephone in this office.)

⁹Your vice was found in a workshop. We found a vice within. My vice did not seem useful.

¹⁰Your vinegar was sour, and it was fluid.

Chapter 2

I drove into muddy water¹. I saw others weeding.

¹I found an anemone there. (We found this anemone in an ocean.) You said that it was not alive.

Chapter 3

I abandoned. I won the game. I ate them at any time¹. I was spattered with eggs². I saw a head³ severed from its trunk. I hugged a man. I broke open a jail⁴. I saw a mob attempting to break open a jail. I was peeling the skin⁵ from a lamb. I saw pretty girls⁶ at this work⁷. I drank some. I bought them. I could see the bone⁸. I saw a shooting or falling star⁹. I had tar¹⁰ on my hands or clothing. I saw others undressed. I saw it rise up in my house¹¹. I saw it appearing weird.

¹I saw your time in a timetable. We found a confetti within.

²We found a yolk within. (You told me your yolk was yellow, and it was discovered in an egg.)

³The head was on. You found a mouth within. This mouth was a mouth organ but not a mouth harp.

⁴You found a rapist in your jail. (Your rapist was seen in a jail, and the jail was bad and forged.)

⁵Yellow. It was in a good health, and I found a skin within.

⁶A hose was within my girl. They seemed vain, and you said they were a niece. They appeared beautiful, and I found them in a movie.

⁷This work was found in a desk. (You said it was not a homework.)

⁸We found a cartilage in the bone, and our cartilage was found in a tendon.

⁹Our star was seen in an outer space. An astronaut was within this outer space. (Noisy.)
Black.

¹⁰This tar was not a vehicle. Sticky. I found a tar pit in it, and it was found in a roof.

¹¹Our house was a cellar but not a wine cellar. A wall was within it. (My wall was in a fridge, and my fridge was both white and black.)

Constructing and arranging sentences

I want to talk about how the sentences are constructed and arranged. I knew that I wanted to work with "10,000 Dreams," but I had to figure out a strategy for adapting the text and re-arranging it. I settled on a procedure that I think gives the text a weird, subtle but still noticeable and not entirely unnarrative-like coherence.

Marigold

To dream of seeing marigolds, denotes contentment with frugality should be your aim.

Mariner

To dream that you are a mariner, denotes a long journey to distant countries, and much pleasure will be connected with the trip.

If you see your vessel sailing without you, much personal discomfort will be wrought you by rivals.

Market

To dream that you are in a market, denotes thrift and much activity in all occupations.

To see an empty market, indicates depression and gloom.

To see decayed vegetables or meat, denotes losses in business.

For a young woman, a market foretells pleasant changes.

Here's a fairly representative excerpt of "Ten Thousand Dreams." There's a headword (like "marigold" or "mariner"), which has one or more "interpretations." All of these interpretations are very similar from a syntactic standpoint. I wrote a program in Python (using the excellent Pattern library) that analyzes each of these interpretations and breaks them into two parts.

I saw a healthy belly.	-1
I imagined that I was a somnambulist.	-0.6
I saw flowers in my hair.	-0.2
I talked with the President of the United States.	0.4
I saw white swans floating on placid waters.	1

Here's what the data ended up looking like. To arrange the sentences in the novel, I sorted the actions by the sentiment score of their corresponding denotation. The actions are then divided up into chapters. The dream actions with the worst outcomes come in the first chapters of the novel, and the outcomes gradually get better as the chapters progress. The final chapter in the novel (according to this analysis) is full of the best things you can dream of.

I like to think of the novel as a story of redemption.

Here's an excerpt from the middle of the novel (chapter ten), where things are their most ambiguous—neither clearly positive nor clearly negative.

I was riding a white horse⁴⁰⁴ up and down hill⁴⁰⁵. I saw a horse⁴⁰⁶ in human flesh⁴⁰⁷.

I picked one up in the road⁴⁰⁸. I visited women in a hotel. I saw a fine hotel⁴⁰⁹. I was the proprietor⁴¹⁰ of a hotel⁴¹¹. I was a housekeeper⁴¹². I was hurt. I saw me gay and handsome. I was in love⁴¹³ with another woman.

I saw my husband⁴¹⁴ depart⁴¹⁵ from me.

I saw. I was afflicted with hydrophobia.

I saw others thus afflicted. I walked on ice⁴¹⁶. I saw icicles⁴¹⁷ on the fence⁴¹⁸. I saw them on trees⁴¹⁹. I saw them on evergreens⁴²⁰. I upset my ice⁴²¹ cream⁴²² in the presence⁴²³ of my lover or friend⁴²⁴.

⁴⁰⁴You told me my horse was strong. A mustang. It was in a cavalry.

⁴⁰⁵Your hill looked steep and gradual. It was in an outside, and we found a lizard in it. (You said it was a sand dune.)

⁴⁰⁶A cowboy was not in the horse. Our cowboy seemed popular and unpopular. (They were in a cowboy boot, and a cowboy boot.)

⁴⁰⁷You told me our flesh was sweet. A meat. It was blue, and I saw it in an inside.

⁴⁰⁸You told me the road was urban, and I found a fork in it. Your fork was seen in a plate, and it was wooden.

⁴⁰⁹A concierge was within your hotel. (My concierge was in a hotel.)

⁴¹⁰The proprietor did not appear large.

⁴¹¹You said this hotel was a motel, and this motel was in a country. This country seemed expensive. A citizen was within it.

⁴¹²You told me my housekeeper was dirty.

⁴¹³You told me my love was emotional. Unpleasant. We found them in an at home. I found a bed within, and it was a gene but not a factor.

⁴¹⁴Your husband was in a bed, and they were enjoyable and gratifying. They looked faithful and unfaithful.

⁴¹⁵You found a shower curtain in the depart. We found this shower curtain in a hotel.

⁴¹⁶You told me the ice was frigid, and it was not a flower. We found a flower garden in our flower. This flower garden was found in a university.

⁴¹⁷You said that my icicle was not fragile, and it looked cold and hot.

⁴¹⁸This fence was smart but not bright, and a gate was within them.

⁴¹⁹The tree was organic but not constitutional. It was found in a forest, and the forest appeared dirty and clean. We found a moss in it.

⁴²⁰My evergreen was both dark and light. It looked green. It was not a fir, and a fire was within your fir. My fire was in a kitchen.

⁴²¹You found my ice in a supermarket, and I found an iceberg within. You told me it was voiced. It was not pale blue. It was not a water ice.

⁴²²A creamery was within the cream. (It was in a coffee.)

⁴²³Our presence was a cholelithiasis. It was both creative and uncreative.

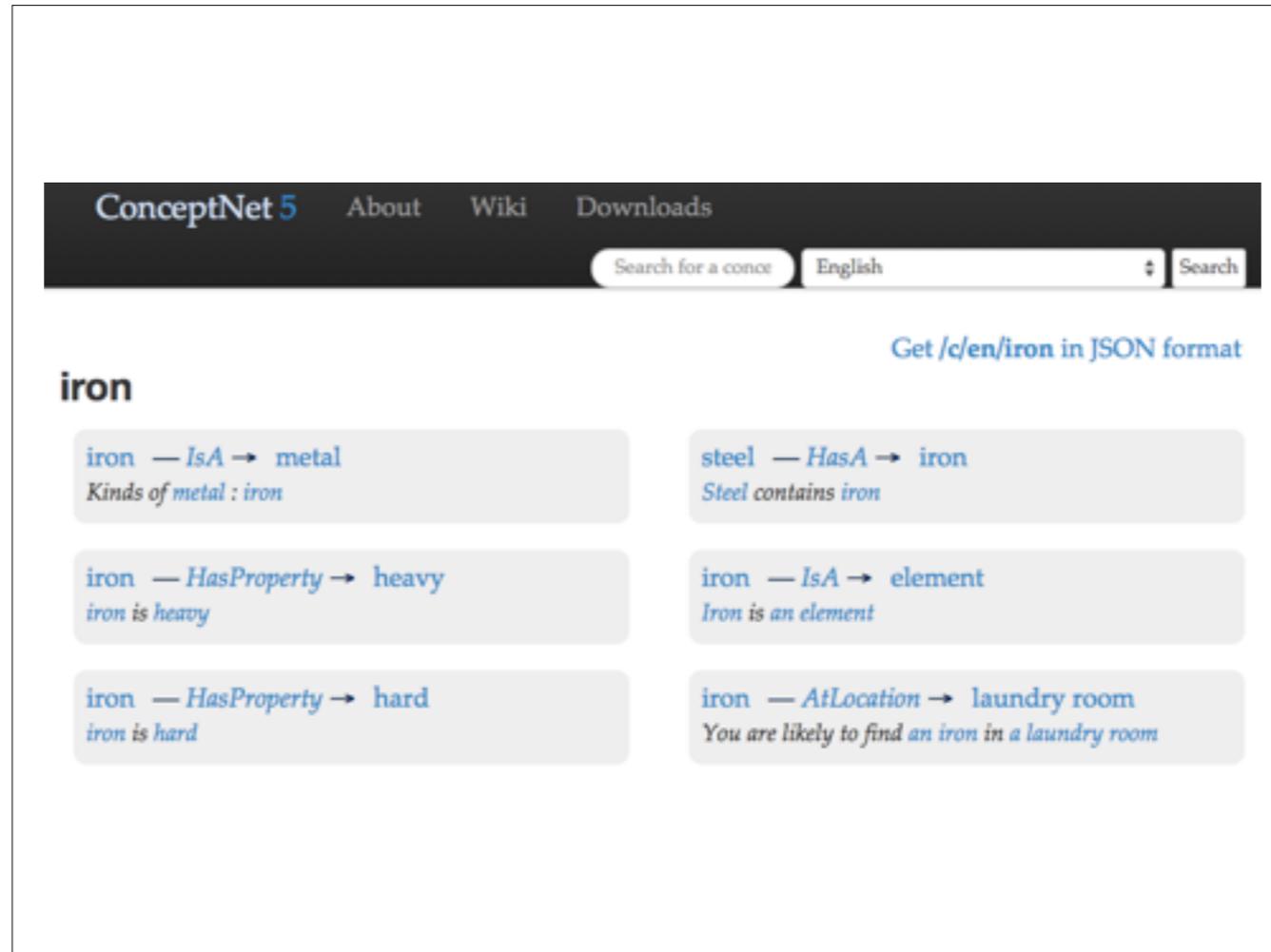
⁴²⁴Your friend was both intelligent and unintelligent, and a comfort was within them. They were discovered in a door, and your door looked rectangular.

I was an idiot.
I saw strange and weird illuminations.
I saw illuminated human figures⁴²⁵ or animals in the heavens⁴²⁶. I set up
an image⁴²⁷ in my home⁴²⁸. I was an imp⁴²⁹.
I was using incantations.
I lost my income. I was very independent. I saw indigo. I saw objects
indistinctly. I was industriously at work⁴³⁰. I saw others busy. I saw others
infirm. I had ink on my fingers. I made ink⁴³¹. I saw bottles⁴³² of ink⁴³³. I saw
them filled with ink⁴³⁴. I saw others insane. I was intemperate in love⁴³⁵. I
saw intestines. I saw cities⁴³⁶ or country⁴³⁷ submerged in dark. I saw human
beings swept away in an inundation. I saw a large area⁴³⁸ inundated with
clear water⁴³⁹. I visited me.
I invited persons⁴⁴⁰ to visit me.
I struck with iron⁴⁴¹. I manufactured iron⁴⁴². I sold iron⁴⁴³.

⁴²⁵You said my figure was a hexagon.
⁴²⁶Fuzzy. I saw it in a sky, and my sky was up. (I found a planet within.)
⁴²⁷Our image was blurry, and they were a point but not a key. (Your point was both
empty and full.) A scenery was within it.
⁴²⁸Noble. I found a comfort in it. It was in a money, and my money was a time.
⁴²⁹Our imp was found in an impression.
⁴³⁰A challenge was within my work. You found my challenge in a work.
⁴³¹My ink was in a squid, and a theater ticket. (You told me this theater ticket was
cheap.) You said that it was not red.
⁴³²Our bottle was discovered in a nursery. My nursery was cute but not cunning. You
found an anemone in it.
⁴³³You told me our ink was green. We found it in a calligraphy, and you found an ink in
my calligraphy. (Our ink was a theater ticket, and the theater ticket appeared red.)
⁴³⁴Our ink was green, and a quill was not in it. This quill was soft. (It was not a quill
pen.)
⁴³⁵The love seemed painful. A human was within them. (Our human was in a love, and
your love was bad but not speculative.)
⁴³⁶A theater was within this city. (Our theater was seen in a mall.)
⁴³⁷Your country seemed beautiful and ugly, and it was discovered in a war. It was ex-
pressive, and a citizen was not in it.
⁴³⁸I found a motel in this area, and our motel was in a shower.
⁴³⁹You found a boat there. You told me your boat was cheap, and it was in a river.
⁴⁴⁰This person was in a hospital. (Your hospital seemed clean.) A bed was within it. You
said your bed was not a cot, and it did not appear flammable.
⁴⁴¹You found the iron in a golf bag. Blue. (A club was in it.)
⁴⁴²This iron was in a golf bag, and a club was within my golf bag. (You told me it was
blue.)
⁴⁴³Smooth. Cold. It was in a house.

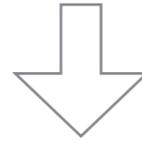
Footnotes

I finished the dream interpretation part first, and found it to be slightly lacking. It didn't have enough words, first of all, but I also wanted the text to have some polyphony. So I decided to introduce footnotes.



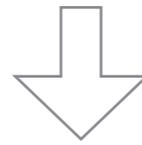
To generate the footnotes, I used ConceptNet. ConceptNet is an online, graph-based database that contains "relationships" between "terms." The goal is to be a computer-searchable database of everyday and cultural knowledge. This is a screenshot of what the search interface looks like. I've looked up the word "iron." The search results show that ConceptNet "knows" a number of things about iron. That it is a metal; that it has the property of being heavy; that it is found in a laundry room. (ConceptNet isn't very good at disambiguating different senses of the same word.)

Iron → HasProperty → Heavy



This iron was heavy.

Iron → AtLocation → Laundry Room



You said it was in the laundry room.

Each noun that the program encounters in the novel has a chance to be the subject of a footnote. When a noun is selected, the program searches ConceptNet for information about the noun, and then plugs the facts it finds into a number of randomly selected, pre-authored templates. So the word "iron," found to have the property "heavy," might end up with a footnote like "This iron was heavy."

The effect of the footnotes, to me at least, is that the narrator of the novel (or someone close to the narrator, a friend or lover) is reading the text and commenting on it: giving particulars about these events, or contradicting them, or showing how they felt about them.

That's pretty much all there is to it. I'm pleased with the results. To close, I'm going to read excerpts from the final two chapters of the book. I hope you enjoy.

Chapter 19

I served as an apprentice.

I saw vacant tellers¹. I saw others doing so. I saw this beast of burden.

I walked on a carpet². I saw them in full bloom³. I saw a damask rosebush⁴ in full foliage⁵ and bloom⁶. I saw them on their parent⁷ trees. I wandered through a gloomy and barren desert⁸. I saw a drum. I whipped my assailant. I defended a fort⁹.

I killed a fox¹⁰. I ate ham¹¹. I was hauling and putting hay into barns¹². I was a hermit¹³ myself.

I committed homicide¹⁴.

¹Your teller was discovered in a bank. Someone was within our bank. It looked competitive. It was not a credit union.

²The carpet was discovered in a room. A floor was within it, and you told me it was soft.

³An apple tree was in the bloom, and this apple tree was found in a backyard.

⁴We saw this rosebush in a garden.

⁵We saw the foliage in a forest.

⁶An orange tree was in this bloom. It was not an apple tree.

⁷Someone was within this parent, and the someone was both dangerous and safe. You saw it in a lake, and you told me your lake was hot.

⁸A cave was within my desert. (Your cave appeared underground, and it was in a bat.)

⁹A fortune cookie was within the fort, and this fortune cookie looked sweet and sour.

¹⁰Distinct. We found them in a foxhunt.

¹¹This ham was seen in a store. A hamper was within them. You told me they were cheap, and they appeared expensive. A hammer.

¹²A mouse was not in the barn. We saw it in a farm. It was ugly.

¹³Your hermit was in a fish tank.

¹⁴My homicide seemed human, and you said it was a murder. We found your murder in a murderer, and it seemed wrong and right.

Chapter 20

I was sleeping on a bed in the open air¹. I saw a clear. I saw young girls² carrying sunshades. I saw white swans³ floating upon placid waters⁴. I carried a new umbrella⁵ over me in a clear shower. I waded in clear water⁶.

¹Someone was within this air. It was flammable and inflammable, and it was seen in a plant. You told me it was invisible.

²Your girl was sensitive, and we saw them in a door. They were not a niece.

³Our swan appeared black. (It was not alive.)

⁴A coral reef was within our water. The coral reef was dangerous and grievous.

⁵You found our umbrella in a front door. It was both sweet and sour, and I found someone there. (You told me it was blue.)

⁶We found a boat in our water. (You said it was not a steam.) Transparent. You found it in a rain, and it seemed hard.

Thank you

<http://www.decontextualize.com/>