

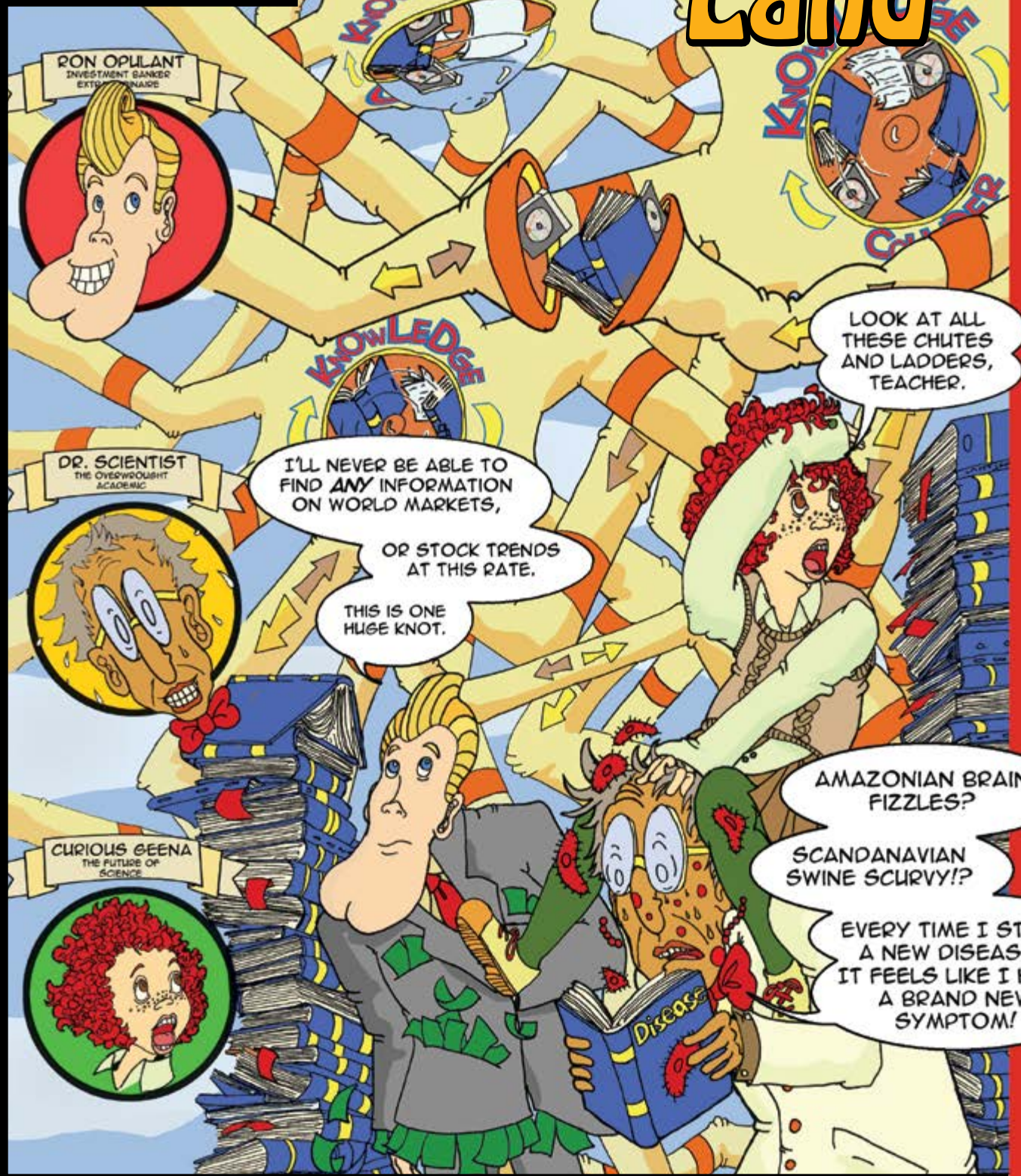


ISSUE
NO. 1



Adventures in Knowledge Land

A QUEST FOR WISDOM IN THE INFORMATION AGE!



RON OPLUNT
INVESTMENT BANKER
EXTENDING

DR. SCIENTIST
THE OVERWROUGHT
ACADEMIC

CURIOUS GEENA
THE FUTURE OF
SCIENCE

I'LL NEVER BE ABLE TO
FIND ANY INFORMATION
ON WORLD MARKETS,

OR STOCK TRENDS
AT THIS RATE.

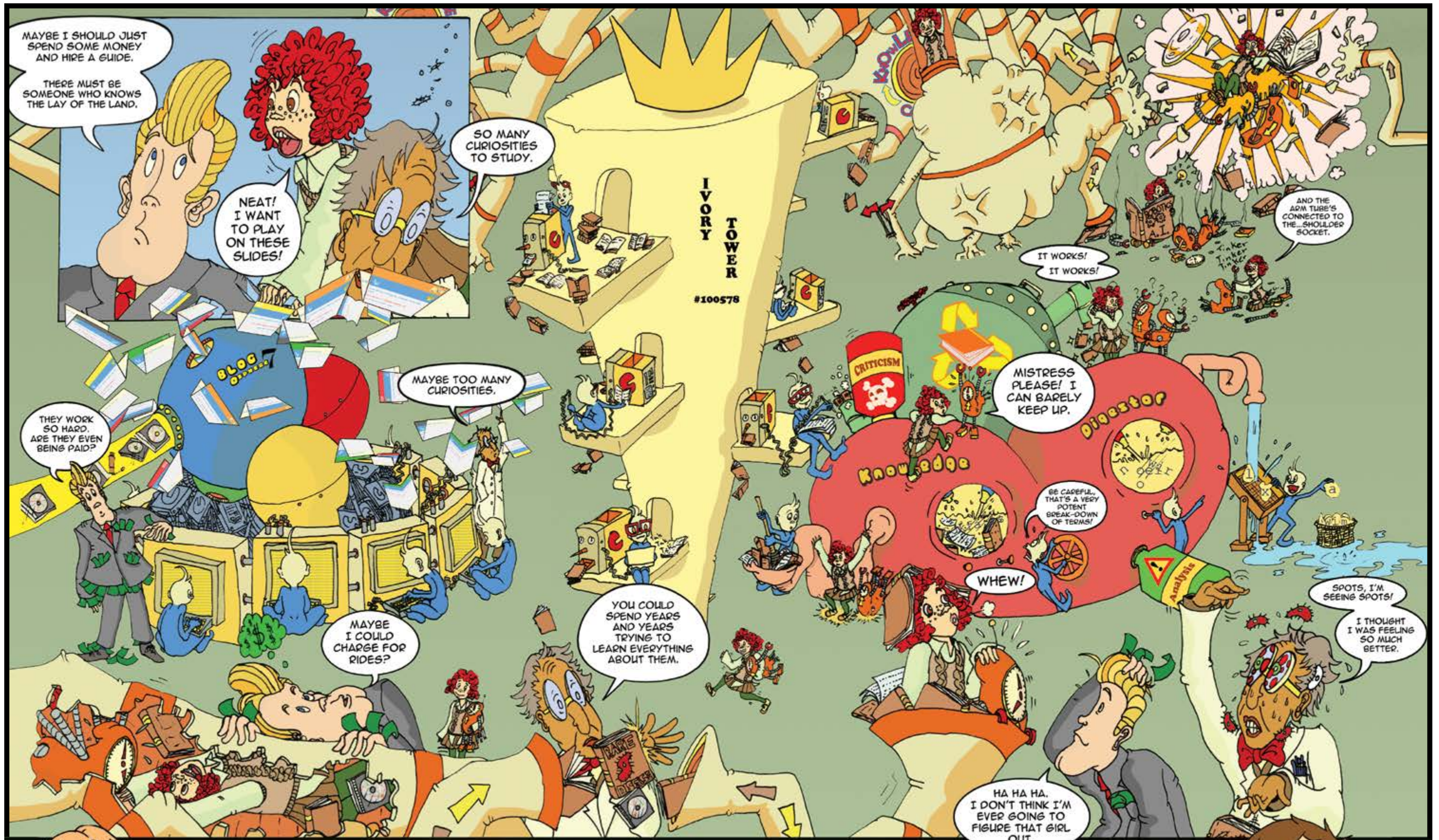
THIS IS ONE
HUGE KNOT.

LOOK AT ALL
THESE CHUTES
AND LADDERS,
TEACHER.

AMAZONIAN BRAIN
FIZZLES?

SCANDANAVIAN
SWINE SCURVY!?

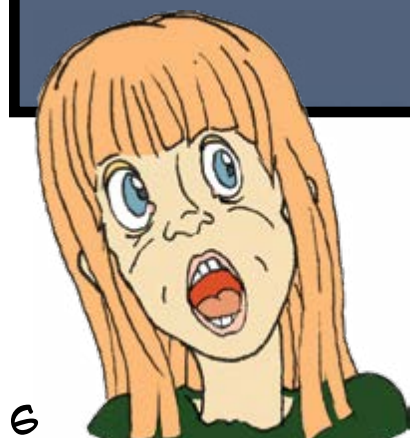
EVERY TIME I STUDY
A NEW DISEASE...
IT FEELS LIKE I HAVE
A BRAND NEW
SYMPTOM!



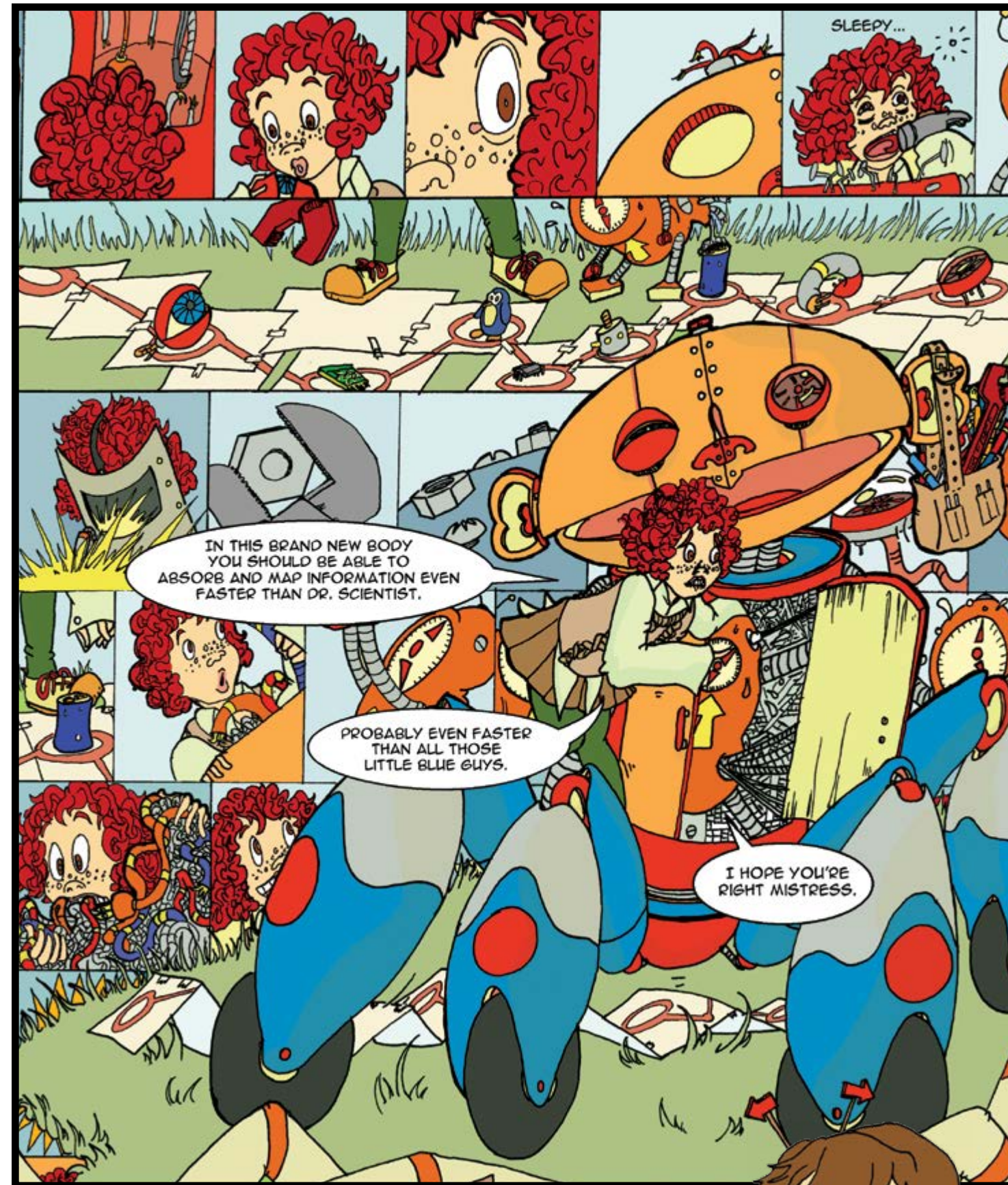
The future of scientific research faces an incredible challenge! The valuable information that researchers work so hard to obtain, analyze, and record is threatening to overwhelm our pursuit of knowledge. You see, there are more active researchers now than there ever were throughout the entire history of science. That means that some areas of science can produce more than 40,000 papers a month. All of this information is filling up libraries and storage facilities faster than they can be constructed. In order to build upon but not repeat the work of others, a single researcher is expected to know more texts than anyone can possibly read in a lifetime. No individual person or machine can process and make sense of such an enormous stream of data, information, knowledge, and expertise. Are we doomed to keep reinventing the wheel for eternity, or is there a way out? This comic tells the story of three characters and their adventures in the land of knowledge. Select a character and enjoy the journey!

After a long and arduous journey, our three intrepid heroes have made it to Knowledge Land. In this strange world, little blue "information sprites" operate gigantic machines that create, shift, spin, redistribute, and process enormous amounts of information. The constant and furious motion of these materials is a confusing sight. I'm afraid that even the information sprites won't be able to manage this information flood for long! Will Ron Oplulant, Banker Extraordinaire, find the key to the world's investment landscape? Will Dr. Scientist be able to complete his research without being afflicted by mysterious symptoms? And will Curious Geena find new and exciting things to discover? Let's continue and find out.



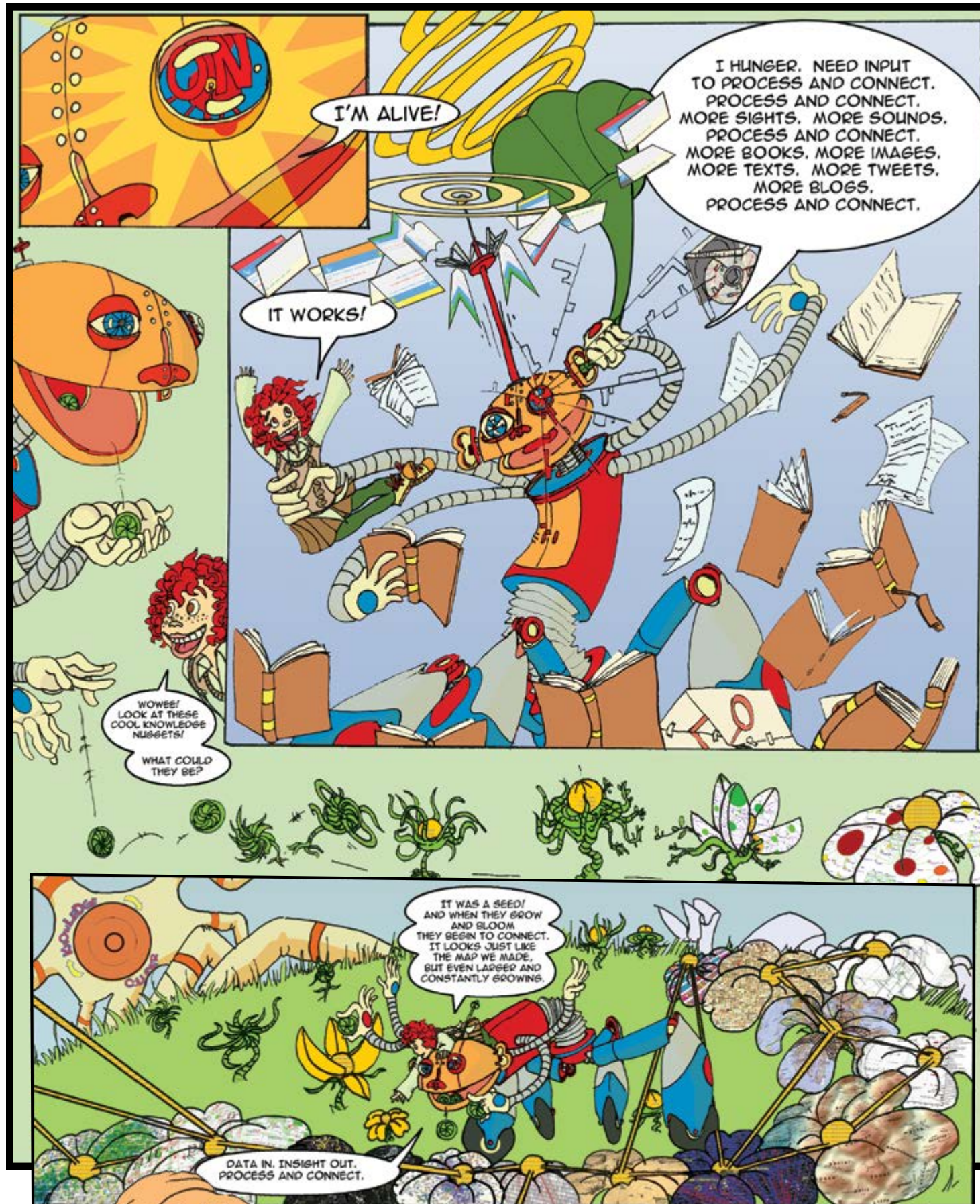


From the first swing of the hammer and the first spin of the wheel, humans have invented and utilized tools to amplify our physical strengths. The same is true for our intellectual strengths. While science and technology increase at a rapidly accelerating pace, human perception and cognition appear to stay nearly constant. Therefore, computers are instrumental for augmenting our collective intelligence by performing calculations, mining and visualizing massive amounts of information, and connecting us to people across distances. Today, we have robots to do our dull, dirty, and dangerous work. Soon, they will become indispensable partners in our quest to master our ever more complex and demanding professional and personal lives. Virtual or real, robots will empower us to master the many physical objects and bits and pieces of information that we all depend upon.

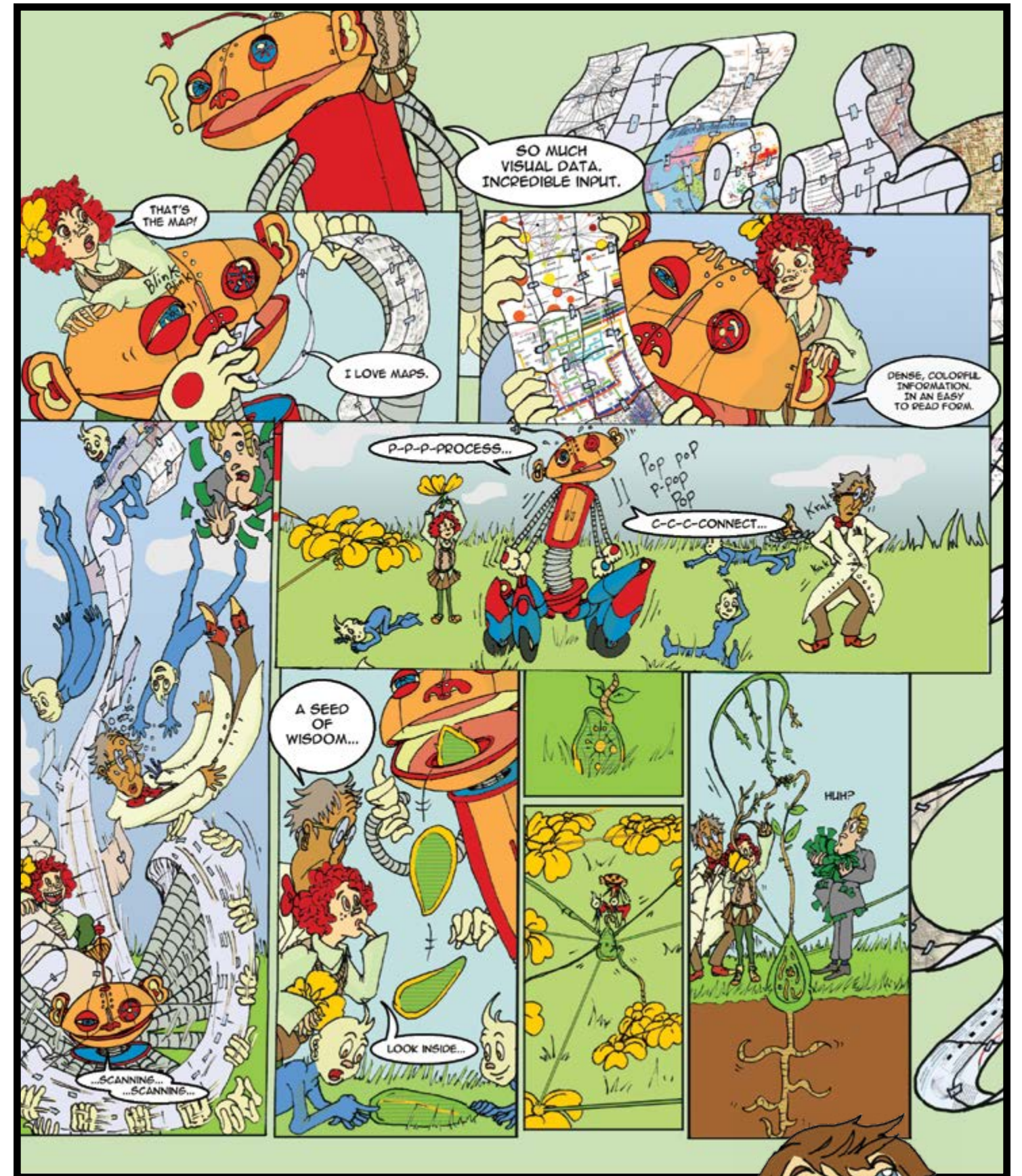


Everyone is so busy! There are so many exciting things happening, and our map has gotten so big that it has broken the atmosphere. There must be more information in Knowledge Land than we could ever imagine. And look, Curious Geena is giving our little robot friend a full-blown upgrade! I hope he likes his brand-new body. In the beginning, I was a little panicked about trying to squeeze so much action and so many simultaneous events into only two pages. But I'm really happy with the way both of these scenes turned out. Tracey Theriault added effects on all of the science maps and did a wonderful job of bringing the entire idea together. I wasn't expecting it, but Curious Geena's energy and exuberance make her the perfect amateur scientist and robotics engineer.

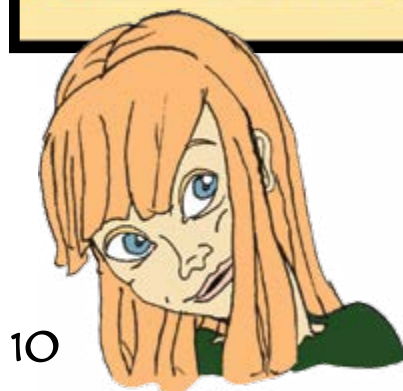
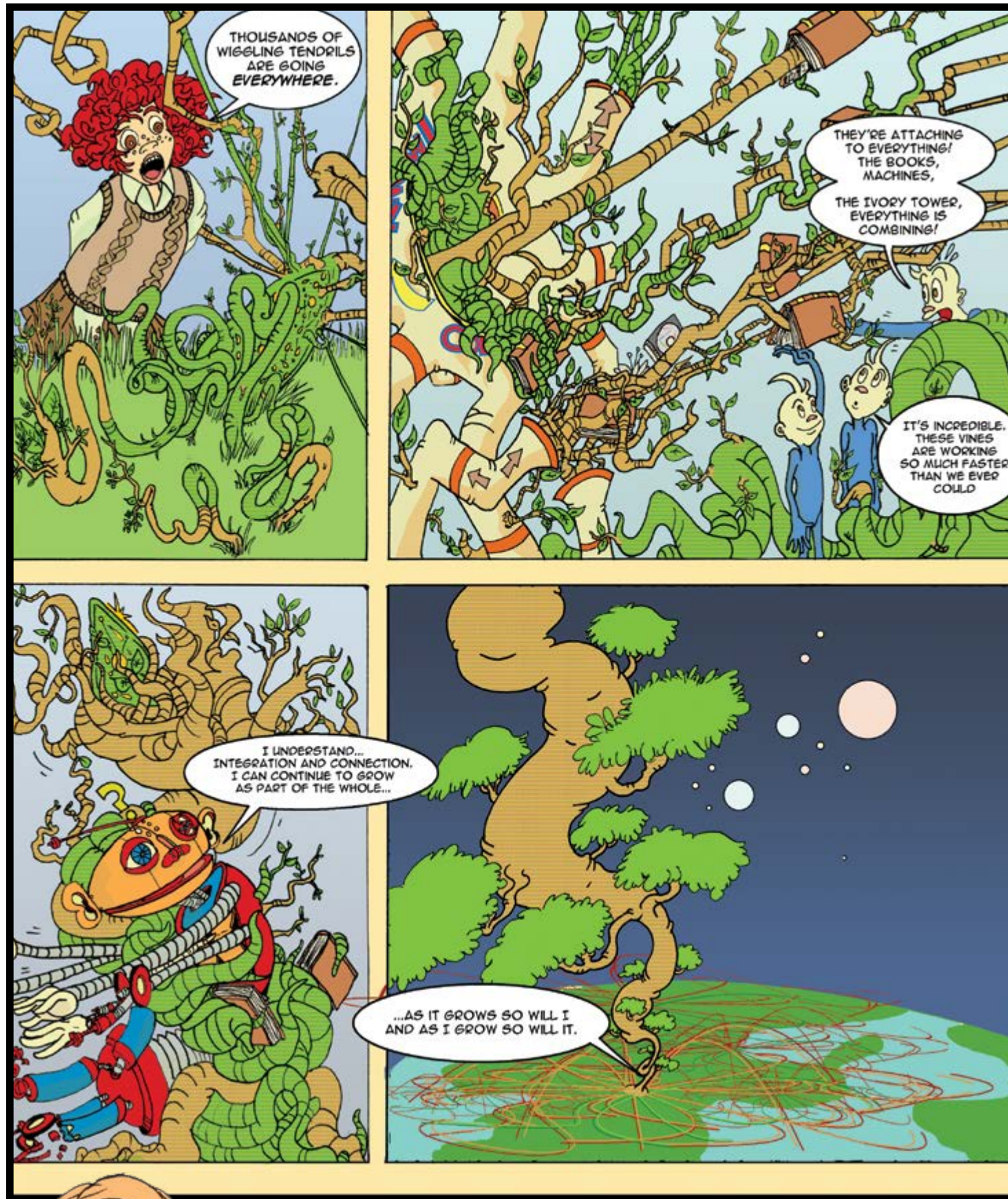




In 1934, Paul Otlet published the *Traité de Documentation*. In it, he argued that the book is an inconvenient and inefficient carrier of information that has to be decomposed and dissected into its contents, images, schemas, charts, and tables for efficient information usage. He argued that no document could be properly understood by itself; rather, a document's meaning becomes apparent only through its influence on other documents, and vice versa. "[A]ll bibliological creation," Otlet wrote, "no matter how original and how powerful, implies redistribution, combination and new amalgamations."

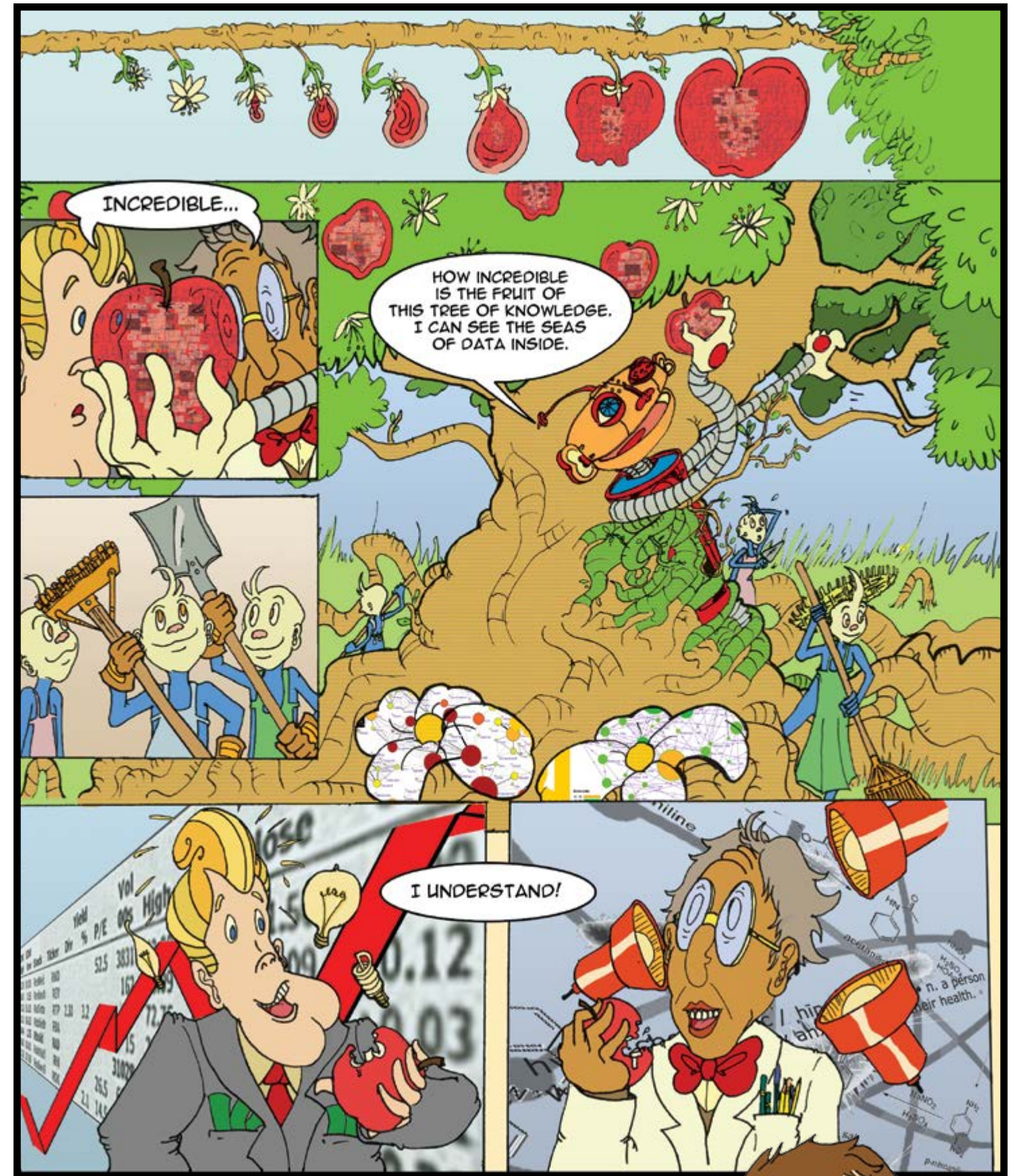


Our robot friend's appetite for knowledge is even bigger than he is! He is hungry and thirsty for all the information that he can hear, see, touch, or scan with his electric eye. But it looks like he isn't just keeping it to himself. . . He's *changing* it. These new flowers look a lot like our old map. I'm certain they are connected. Maybe if he can find enough information he can make a flower bigger than Knowledge Land. Or maybe a flower that's bigger than the entire planet! The use of seeds, flowers, and plant-life felt like the perfect visual connection to the growth, reproduction, and distribution that occurs in scientific and academic contexts. Each flower feels like a brand-new school of thought, theory, or academic discipline ready to grow, go to seed, and distribute into the wind. I really enjoyed doing what I could to make each seed and flower feel energetic and alive.



The Internet and the World Wide Web are the beginnings of a global "world brain" that intimately links the unique capabilities of people and machines. Online services let us effectively operate in a complex web of social, professional, and other networks; diffuse information in an instant; and empower us to manipulate real-world objects around the globe. Advanced data mining and visualization tools help us make sense of BIG data in support of knowledge navigation, organization, management, and utilization for improving public health and welfare and informing a sustainable way of living on Earth.

What would you attempt to do if you had the wisdom of the world at your fingertips?



Oh my goodness! That giant Seed of Wisdom is definitely growing into a giant Tree of Knowledge. It looks like the roots of the tree run so deeply that they become a part of everything around them. It would seem that all the knowledge in Knowledge Land has become a part of this great Tree of Knowledge. Oh look! All that information has been transformed into one little apple! I really enjoyed the rampant growth of the giant Knowledge Tree. The idea of huge, woody tendrils attacking, attaching to, and transforming whatever they come in contact with is intriguing and exciting. Though, as we move further and further into the Internet age, the idea of a mass of connective tendrils feeding into a super structure feels less fantastic and more familiar. Closer contact with our own technological trees of knowledge is incredibly exciting.





Credits

This comic book was designed by Geoff Hobart, a freelance cartoonist currently living in Chapel Hill, North Carolina, in close collaboration with Katy Börner, Victor H. Yngve Professor of Information Science at the School of Library and Information Science at Indiana University in Bloomington, IN. Much of Börner's commentary was taken from the *Atlas of Science* by MIT Press. Geena was inspired by Börner's daughter Eleanor. We would like to thank Todd Theriault for editing the commentaries and Tracey Theriault for adding all the science maps and building the final layouts. The work was supported by the CreativeIT Program at the National Science Foundation under Grant No. IIS-0715303 and the Cyberinfrastructure for Network Science Center at Indiana University. Any opinions, findings, and conclusions or recommendations expressed in this material are those of the author(s) and do not necessarily reflect the views of the National Science Foundation.



CNS Cyberinfrastructure for
Network Science Center