Introduction
Placebo effects are often quite funny, and so the subject seemed rich terrain for conceptual comics. In general, humour is an effective, and underappreciated, conceptual tool. It can be an invitation: our entrée to the ponder-worthy. It serves to focus and clarify what an idea can mean. Placebos, in their metaphysical oddity and varied role in the popular imagination, turned out to be a great subject matter, indeed. What follows is a brief introduction to our group, The Argument from Design, our mission, and the way we make comic art.

Comics and collaboration
Our comics are the result of an interdisciplinary and collaborative scholarly partnership between the faculty, students, and alumni of Salisbury University in Maryland. Good collaborations are a natural counterbalance to the prevalence of scholarship-as-authorship, and eschew authority in favour of experimentation and play. Authorship
can be the antecedent of cults of personality, the torments of writing (writer’s block, imposter syndrome), and intellectual property. Collaborations complicate these paths; everyone’s ideas and efforts are mixed from the start. Nobody owns them and nobody worries over them. Everyone gets to own part of the final product. Surprise, laughter, and discovery, and doing things for each other, are the heart of what we are trying to do.

This is not to say collaboration is without challenges—it can be difficult to stay organized, to find the time to meet. This is a volunteer activity, and
each member of our team is only in it as long as it is satisfying and rewarding (and it is not always!). Overcoming these challenges takes experimentation and an ebb and flow of willing participation. It takes time. But the process is always the same.

Our process
First, we research. Podcasts, media, and even urban legends can be a starting point, but we try to track down why people are interested in a topic in the first place. There was ample material available on placebos. We had to teach ourselves what the effect actually is. We had conversations about causality. Bias. Meditation. Acupuncture. Big scary needles in general. We meet every two weeks to share ideas and make sketches. We try to crack each other up. We take notes.

We discovered several specific themes in placebo studies that could be visualized. Daniel Moerman (2011) notes that colour is an amplifying factor in placebo effects. It was national news (NPR, 2008) when a fake opioid painkiller called Valodon was shown to be more effective as it became more expensive, a story that captures ironically the importance of pricing in health care reform. Valodon even had slick marketing materials to enhance the impression of quality care, a kind of graphic placebo art.

Ideas started to emerge from two directions: design and concept. In the former, we kept coming back (by following what made us laugh) to the famous
scene in the *The Matrix* (The Wachowskis, 1999) where the hero has to choose between two pills that represent a decision about how he wishes the foundation of his reality to be established. The pills are coloured; the coloured pills would also presumably have placebo effects.

We hit on the rhyme between placebo and gazebo and could not let it go, even though it seemed pointless. Eventually we realized that the idea that the study of placebos, in the sense of observation and measurement, was potentially tracking a ghost phenomenon, and that it would be just as fruitful to try to measure the effect of being placed in a gazebo. A script was born.
We also hit on the notion that it might indicate our (sometimes frighteningly casual) approach to drugs if people were to deliberately avoid a placebo because they were on a sugar-free diet. Other ideas that ended up in scripts, but without final versions: a really big scary needle could maximize a placebo effect (and make a great visual). An excited board of directors for a pharmaceutical research company is delighted to hear that placebo effects increase when the price of the treatment goes up.

These ideas arise from all members in a workshop format. Sometimes artists will bring in sketches or concept art they are working on. These workshops are then developed into scripts, which typically include image descriptions, captions, and/or dialogue. Sometimes additional research is required for reference images or citations.

At this point the scripts are sent to the artists for sketching. Comics sometimes require multiple rounds of sketching and storyboarding, accommodating major changes such as perspective or continuity. Because we were all working on this project over a busy summer, we largely elected to draw single-panel comics. This part of the process is deliberative and takes from several weeks to over a month. After this is the final inking, or painting and digitizing the images. In many cases changes are made digitally through Photoshop before the images are done.
Why make “the Argument from Design”? We turn the traditional idea of intelligible design on its ear. Rather than presuppose it as a reason to believe in things having a purpose, we question design as it relates to individual ideas, concepts, and projects, and try to stake an argument on the intelligibility of the results of our process. We show that philosophy can be done in iconographic and visual form. Some of our work from the past few years is newly available online (The Argument from Design, n.d.).

A new generation of millennial scientists is making interdisciplinary choices for themselves—note that both of the artists on this project are students pursuing degrees in biology. With the
emphasis on science, technology, engineering, and mathematics (STEM) that has governed the last decade of higher education, we have missed the opportunities that are provided when science students are considered for interdisciplinary work. Images abound in medical science and the sciences of life, and images surely drive the popular imagination of what science does. There are considerable uncharted linkages between bio-medical-empirical imaging strategies and creative image design, and a role for images to play in science communication. Creative design need not distort knowledge but it inevitably broadens its public reach.

Note
1. The Fulton School of Liberal Arts and the SU Office of Undergraduate Research have supported materials and other fees.

References