It's about T:me

FYI: Everyone lives 80 milliseconds in the past

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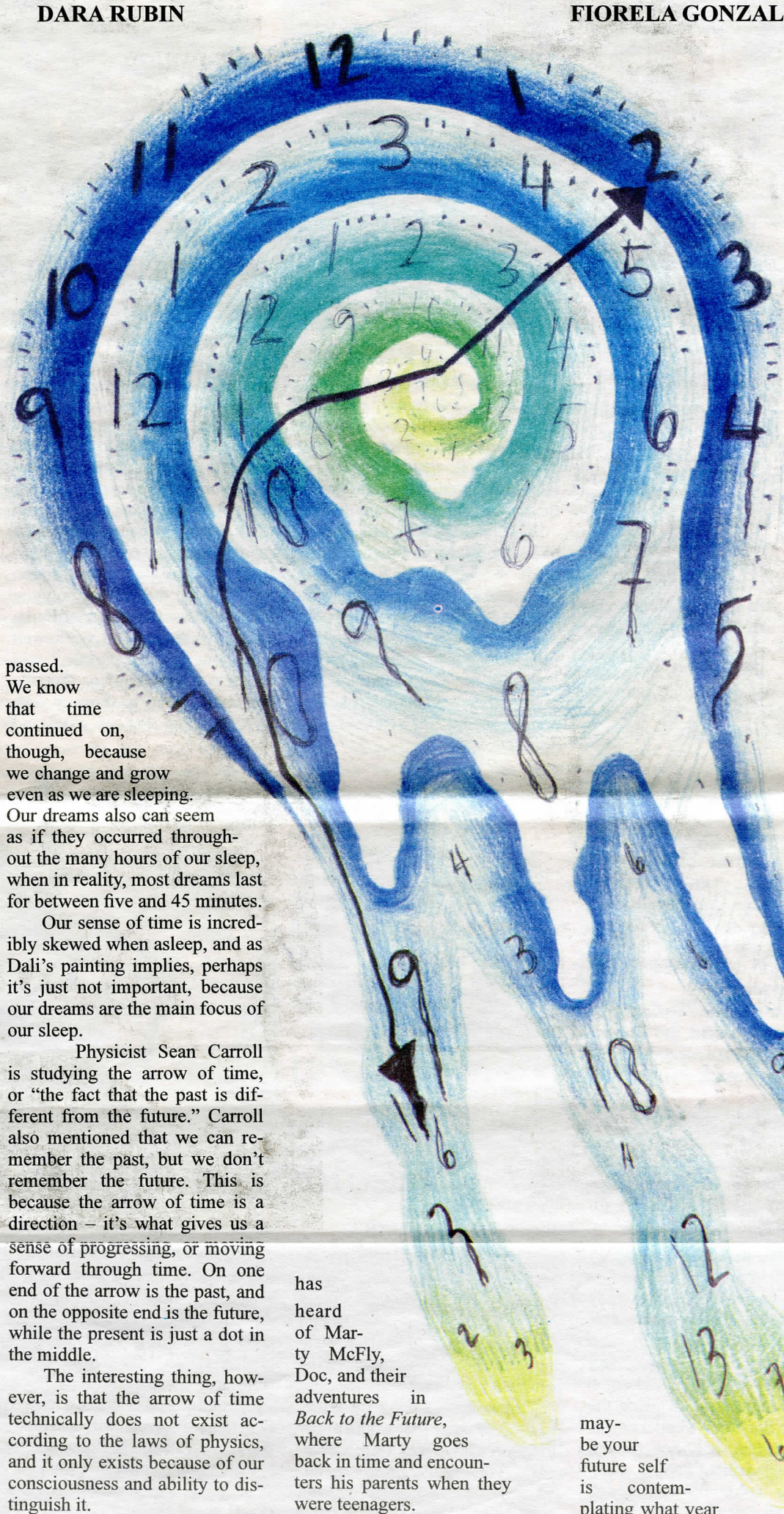

Time – such a simple concept, yet so complex and nearly impossible to define. Time cannot be captured; it cannot be heard, tasted or smelled, yet it surrounds us every hour, every minute, and every second of the day. Time can slowly drag on forever when you are sitting in class, or it can fly by at seemingly impossible speeds when you are with friends.

Time is a basic word that we all understand, but if you were asked to actually define it, could you? As Saint Augustine once wisely put it: "What then is time? If no one asks me, I know what it is. If I wish to explain it to him who asks, I do not know."

Dictionary.com defines time as "the system of those sequential relations that any event has to any other, as past, present, or future; indefinite and continuous duration regarded as that in which events succeed one another," although this definition probably means absolutely nothing to you. That's because time is different for everyone; we all perceive it in various ways.

"If you're thinking about it in everyday life, time is obviously important for scheduling and the general gist of organization, but in my opinion, if you think about it with an abstract point of view, it opens up your senses to think about outside worlds, because time is technically a measure for the way that we live. But if you think about it in other universes, it depicts how things will happen and how things have happened," said junior Raine Oesterle.

"Time is an invention made by humans to work around a schedule," said junior Jake Duckworth.

"Time is the restriction that life puts on us," said sophomore Meg Tynan.

Or, as The Doctor from *Doctor Who* likes to explain it, "People assume that time is a straight progression of cause to effect, but actually, from a nonlinear, non-subjective viewpoint, it's more like a big ball of wibbly wobbly timey wimey stuff."

Supposedly, before the Big Bang occurred, there was no such thing as space or time.

"In the theory of relativity, the concept of time begins with the Big Bang the same way as parallels of latitude begin at the North Pole. You cannot go farther north than the North Pole," professor of cosmology Kari Enqvist told *ScienceDaily*.

In 1931, Salvador Dali created a famous painting known as "The Persistence of Memory." In this painting, there are several clocks and pocket watches, all of which seem to be melting.

"Salvador Dali's painting basically symbolizes that time isn't really a set measurement. For ourselves, we have an hour and a minute, but if you think about it as an actual concept rather than a measurement, you get the idea that things happen at different paces on different planes. It's more saying that it's up to interpretation because it's really just a concept because if we, per se, didn't put a measure on what time actually is, time could be a whole different view," said Oesterle.

Perception of time while we are sleeping is an interesting matter. When we awake in the morning, it sometimes feels as if we just went to sleep and no time has passed. We know that time continued on, though, because we change and grow even as we are sleeping. Our dreams also can seem as if they occurred throughout the many hours of our sleep, when in reality, most dreams last for between five and 45 minutes.

Our sense of time is incredibly skewed when asleep, and as Dali's painting implies, perhaps it's just not important, because our dreams are the main focus of our sleep.

Physicist Sean Carroll is studying the arrow of time, or "the fact that the past is different from the future." Carroll also mentioned that we can remember the past, but we don't remember the future. This is because the arrow of time is a direction – it's what gives us a sense of progressing, or moving forward through time. On one end of the arrow is the past, and on the opposite end is the future, while the present is just a dot in the middle.

The interesting thing, however, is that the arrow of time technically does not exist according to the laws of physics, and it only exists because of our consciousness and ability to distinguish it.

Carroll also brings up a very intriguing fact: we live 80 milliseconds in the past.

"Our conscious experience takes time to assemble, and your brain waits for all the relevant input before it experiences the 'now.' Experiments have shown that the lag between things happening and us experiencing them is about 80 milliseconds," Carroll told *Discover Magazine*.

Then, there is also the concept of time travel. Unless you've been living under a rock for the last 40 years, (or perhaps you just arrived in this century, courtesy of your time machine) everyone has heard of Marty McFly, Doc, and their adventures in *Back to the Future*, where Marty goes back in time and encounters his parents when they were teenagers.

Carroll argues that time travel is impossible, or at least going back to the past is. Going to the future is more plausible, as we are currently heading into the future as you read this. The main reason time travel is thought to be impossible is because of all the paradoxes it would create.

If you traveled back in time, for example, and accidentally prevented your grandparents from meeting, then you would destroy your own existence. That's not to say that Carroll is right, though. There is always the possibility that time travel will one day be possible. Who knows: maybe your future self is contemplating what year they want to visit right this very moment!

Although we may claim to have an understanding of what time is, none of us will ever be able to choose the perfect words to truly define the magnificent, yet incredibly complex concept of time, or even understand how it works. For now, all we can do is use our current understanding of time to our advantage, like making sure we're on time for class or we don't miss our favorite TV show, and hope that someone will one day finally crack the code on the mysteries of time.