## **RONDO CODE**

## In perfect harmony.

## BY TONY BALLANTYNE

remember, I was teaching kids how to program computers. I was trying to think of ways to make it easier for them. The thing is, they have no trouble writing lists of instructions; what they find difficult to understand is the looping and the branching..."

Ada broke off as the sound of an orchestra sprang up and the whole world paused. The traffic in the road by the little pavement café, the pedestrians, even the birds in the lime trees. Somewhere up in the sky, aeroplanes hung motionless for a moment. And then their courses adjusted slightly, the music came to an end and the world resumed. Everyone relaxed. Four days since the big glitch, and everything seemed back to normal.

"You understand what I mean?" she said. The journalist opened his mouth to answer and she interrupted him. "Of course you do *now*, but before all the changes, this is what kids used to struggle with."

Ada had taken a dislike to the journalist. He had arrived at the interview with his mind already made up. She was amusing herself by not giving him a chance to speak.

"Like you can draw a square by repeating four times the routine go forward ten steps and turn right ninety degrees. That's an example of a loop. Kids used to struggle with that. Adults used to struggle with that.

"So I was trying to think of a way to help people *understand*. I was listening to kids singing *The Twelve Days of Christmas*, and I thought *that's really quite complex*: in the old jargon, the song is an example of nested loops. You count from one to twelve, first day of Christmas, second day, yes? And then for each day you have to count backwards to one: seven swans a-swimming, six geese a-laying, five gold rings. I thought, that's not a song, that's a code structure.

"I thought, they understand songs, maybe I could teach them to code that way. That's when I came up with the idea of Rondo Code."

She sipped at her drink.

"Why's it called that?" asked the journalist, free to speak at last.

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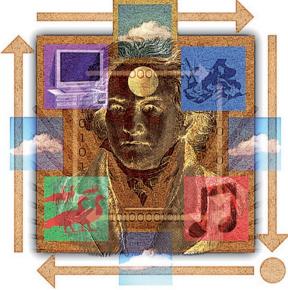
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"Rondo Code? I thought everyone knew that by now, Mr Leibniz. A rondo is a musical form. You play tune A, then tune B, then tune A, then tune C, then tune A and so on. It was a catchy name that sort of described what I was attempting."

Mr Leibniz smiled and Ada knew that the piece of information was of no interest. He wanted to assign blame. People had nearly died in the big glitch.

"Well, it worked," he said. "Anyone who can sing a tune can now understand how to program a computer."

"It's not just that. Think of all the testing we used to do, all of that debugging. Now



you can tell if a program is well written just by listening to it. Does it have musicality?"

"That's an interesting philosophical point," said the journalist. "Are humans programmed to program?"

"It's a silly point," said Ada. "Anthropomorphic thinking. We do what we do."

"Hmm," said the journalist. "But of course, all that was a prelude. Your stroke of genius was still to come."

"Nonsense. Nothing I have done could be described as genius. Rondo Code was a good idea, that is all. There was a lot of hard work went into the syntax and structure. I have shown dedication, nothing more."

"Others might disagree, Ms Byron. Cottrel says your idea to put existing music through Rondo Code was genius."

"Cottrel is a second-rate composer, not a programmer."

"Where did you get the inspiration from, Ms Byron?"

"I hate that word, inspiration. If I hadn't thought of the idea, someone else would have."

"But they didn't, Ms Byron." He shook his head in wonder. "Who would have thought it? That Beethoven's Sixth Symphony could predict the weather? Or that Wagner's *Tristan und Isolde* could control negotiations between warring states?"

"That program has yet to bring a satisfactory resolution to a conflict," said Ada, tersely.

"But it keeps both parties in dialogue rather than fighting. You've got Duke Ellington running primary education and Melissa

ning primary education and Melis Hui controlling the traffic..."

"I think you're simplifying things for syour readers, Mr Leibniz. The music needed some adaptation ..."

Leibniz waved a hand, and it was obvious to Ada that those words would never see print either.

"Was it your idea to use Mozart to control well-being?"

Ada was silent for a moment. Here was the blame.

"No. Nor was I the hero who managed to correct the code and allow us all to sleep again."

Leibniz stared at her. He wasn't quite ready to give up.

"Why did you agree to this interview, Ms Byron? You're famous for being something of a recluse."

"I just don't like talking to the press. It may surprise you to learn that's not the same thing."

The journalist laughed.

"So why speak now?"

"I just wanted people to understand. The big glitch is over."

"Hmm." He tapped his pencil on his teeth. "So, my final question. You're not universally popular, are you? It has been said that once a piece of music is put to work as Rondo Code, all the pleasure is taken from it."

"I've heard that said," said Ada. "There are fools in every age."

"But surely, once a piece of music has been reduced to a mechanical series of notes, once it has been fully understood by a machine, surely the pleasure has all evaporated."

"Since when did understanding spoil pleasure?" asked Ada, standing up. "In my experience, it tends to enhance it." ■

**Tony Ballantyne** has written many short stories. His sixth novel, Dream London, will be published in October by Solaris.