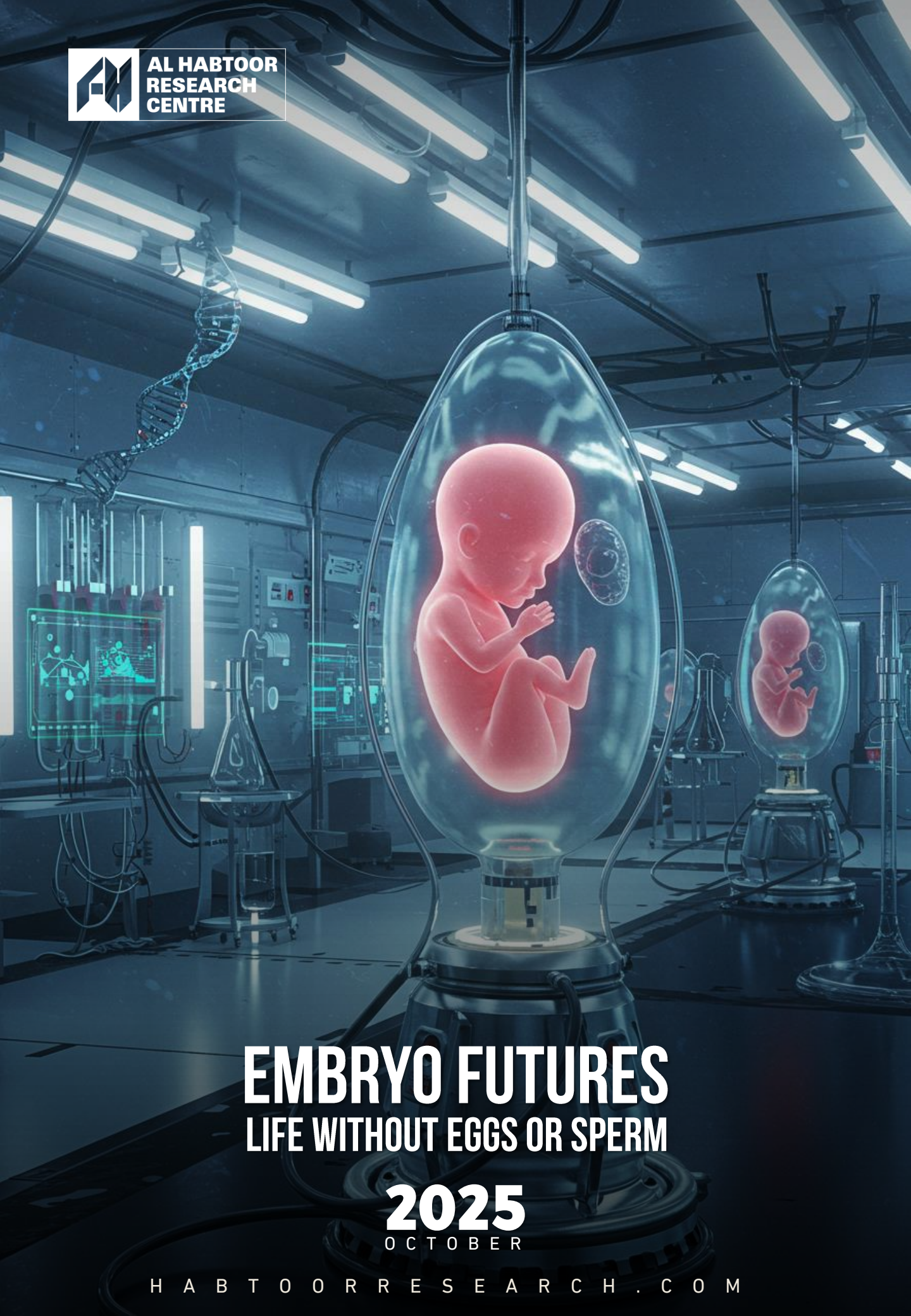

EMBRYO FUTURES

LIFE WITHOUT EGGS OR SPERM

2025

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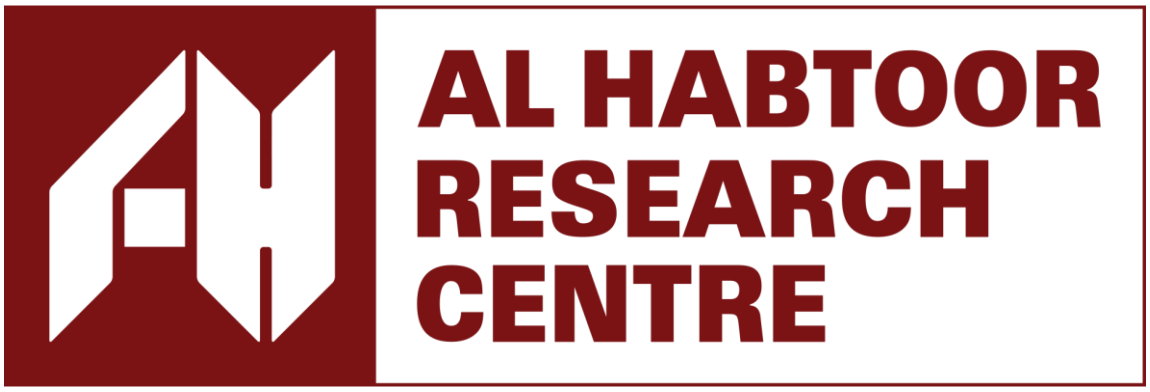
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Dr. Azza Hashem

General Manager of Al Habtoor Research Centre

Prepared by

Rawan Khodeir

Junior Early Warning Researcher

Designed by

Abdelazem Mohamed

Graphic Designer

By 2070, most people had forgotten what it meant to be someone's child. Decades earlier, the government had launched a program called 'The Renewal Project' to address the crisis of collapsing birth rates in aging societies. By then, fertility treatments had advanced to the point where scientists could take ordinary skin or blood cells and reprogram them into stem cells, the raw material of the human body. These stem cells could then be guided to become eggs and sperm, making it possible to create embryos in laboratories without the need for natural reproduction.

Embryo Futures

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The idea for this story was inspired by real-life reports

Orphan Factories:

At first, this breakthrough was celebrated as a miracle for couples who could not conceive. There was no longer any need for painful procedures to collect eggs, no longer a reliance on chance. But as the demographic crisis deepened, governments decided to take control of reproduction. They no longer waited for parents to apply for treatment. Instead, they began mass-producing embryos directly from stem cells and placing them into artificial wombs. These biopods of glass and steel replaced mothers' bodies, with nutrient fluids instead of blood and monitors instead of heartbeats.

The facilities became known as **'Orphan Factories'.** Rows of glowing pods raised children who had no parents at all.

Mira was one of those children.

She was 15, with dark, restless eyes that never seemed to settle. Other **"lab-borns,"** as they were called, accepted their place. They wore gray uniforms, followed the lessons about duty, and spoke politely of their responsibility to keep the nation alive. Mira, however, asked questions that made her caretakers uneasy.

One evening, after a history lesson, she whispered to her friend Noah, **"Do you ever wonder where we come from? Not just the pods, but before that."**

Noah frowned. **"We come from Renewal. That is all that matters."**

"But our cells had to come from somewhere," Mira insisted. **"Someone's skin, someone's blood."**

Noah glanced around nervously. **"You should not say things like that. It is dangerous."**

That night, Mira slipped out of the dormitory. The facility's corridors hummed with a faint electric buzz as she walked toward the archives. Through a cracked door, she found Dr. Sato, an elderly scientist who had worked on the first generation of artificial embryos. His hair was thin, and his hands shook as he fed old papers into a scanner.

Mira stepped into the light. "Doctor... please tell me. Who were we before the pods?"

Dr. Sato froze, then sighed heavily. He motioned for her to sit, knowing that what he was about to say would change Mira's perspective forever. She was one of the most successful lab-born projects he had ever created.

"When I was your age," he said, "every child had parents. You carried pieces of them with you, a mother's smile or a father's eyes. But as the population collapsed, leaders grew desperate. They decided family ties were luxuries society could no longer afford. So, they turned to stem cells. Do you know what those are?"

"Exactly. Scientists discovered how to rewind ordinary cells from hair or skin back into a blank state. From there, we guided them into becoming eggs and sperm. At first, each embryo carried a trace of someone's past, the donor who had provided the original cells. But over time the process became more refined. The traces of family ties were erased, until children were born who belonged to no one."

Mira's throat tightened. **"So I don't have a family?"**

"You are still fully human," Dr. Sato said gently. **"But yes, not a family in the way people once understood it."**

Mira could not focus on her lessons. Her mind churned with images of faceless donors and erased histories. That night, she turned to her caretaker Eva, a former teacher who had joined Renewal years earlier.

"Do you ever miss the way things were?" Mira asked.

Eva hesitated. **"We are not supposed to. But yes, I do."**

"Then why did we let it happen?"

"Because the choice was extinction or the factories," Eva said softly. **"The world chose factories."**

Mira stood in the courtyard long after curfew, staring at the silent skyline. Towers glowed with efficiency, and streets pulsed with lab-born workers who never questioned their place. Yet something about it felt hollow, like a song without melody.

Noah found her there. "What are you doing?"

"Don't you feel it?" Mira asked. **"Something is missing."**

"What's missing?"

"Roots," she whispered. **"We are alive, but we are without roots. We belong everywhere and nowhere."**

Noah looked uneasy. **"Maybe that is freedom."**

"Or maybe it is loss," Mira said.

Soon she discovered that others her age were feeling the same. Across the country, lab-borns began asking questions their teachers could not answer. They wanted to know their origins. They wanted stories, not statistics. For the first time, Renewal faced resistance from those it had created.

Government officials praised the program's success, pointing to stable population numbers, to the absence of poverty, to productivity that never dropped. But outside the official reports, the truth spread: the lab-borns felt empty.

Mira found herself among those voices. At a secret meeting in an abandoned train station, she stood before dozens of her peers.

"We are not mistakes," she told them. "We are not failures. But we deserve to know who we are. If the world chose to raise us without parents, then it is our choice to decide what it means to be human again."

Her words echoed in the damp air, and for the first time, Mira felt something stir among her generation: hope.

The Orphan Factories continued to hum. More pods glowed with new lives, and machines raised children with clinical precision. But outside the glass walls, a different future began to take shape. People debated whether the factories had saved humanity or stolen something essential from it.

Mira often returned to the archives to sit with Dr. Sato. One evening, she asked him, **"Do you think we can rebuild families? Even if they are not biological?"**

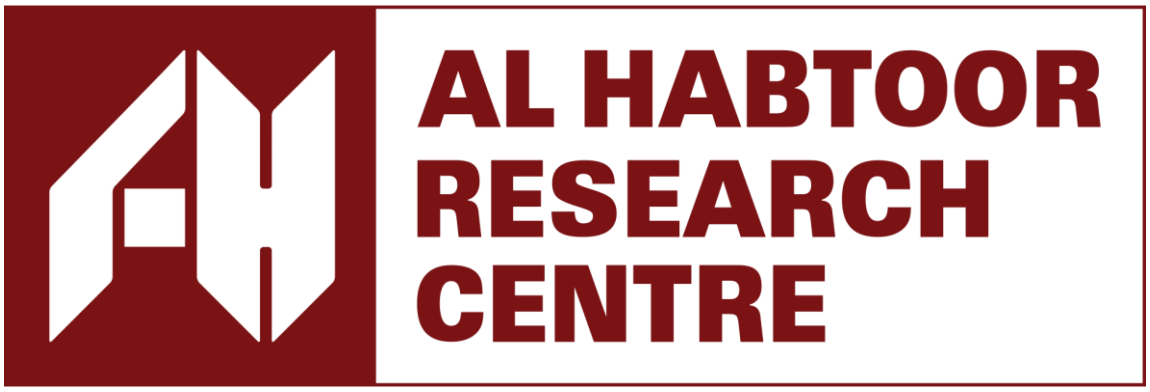
The old scientist gave her a tired smile. **"Family was never just about blood. It was about memory, care, and belonging. If you create that for one another, perhaps you can find what was lost."**

when Mira herself became a caretaker, she told the younger lab-borns stories at night. They were not about mothers and fathers, she had none to give, but about kindness, courage, and people who reached for each other in a world of machines.

As the children drifted to sleep, Mira whispered, “You are not orphans. Not while we have each other.”

And somewhere beyond the orphan factories, science continued to advance, raising the question of whether humanity’s next chapter would be written by love or by laboratories.

As stem cell technologies continue to blur the boundaries of birth and biology, the challenge before us is not only scientific but deeply human. Laws must evolve to ensure that progress serves people rather than replaces them, protecting the dignity of life even as its creation becomes more artificial. Regulations need to define clear limits on how far governments and corporations can go in shaping the future of reproduction. Ethical frameworks must catch up with innovation, demanding that every discovery considers the consequences of who we might become, not just what we can make. This issue of Futures Imagined reminds us that science will always be a mirror of our values, and whether that reflection is humane or hollow depends on the choices we make today.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