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## Editorial

## Helpless indignation

'Tragic' sounds a trifle lame to describe the present state of affairs of our state, even though the feeling in the hearts of the general public cannot be far from it.

The Government has shown, in fits and spurts, that things can and does happen if the rulers so put their minds and hearts to any task, which begs the very relevant and necessary question: is the Government deliberately keeping the state on tenterhooks with engineered chaos and calculated mayhem?

Nothing that has been done for the development of the State so far looks and feels systematic or sustainable- from the various steps reportedly taken up to ease the present unrest and increasing frustrations and infrastructures being constructed with shoddy workmanship and dubious results, to the haphazard and stop-gap measures in terms of the essential services being provided, mostly on paper to dispense off with the official requirements without ever taking the trouble or the initiative to check on the efficacies of such schemes and welfare measures.

The reality we are undergoing today is a far cry from the trumped up reports and statistics that make up the records meant for display at the centre, the most obvious results being the huge leap in law and order situation and promotion of Manipur from the least developed state category to the less developed one without having nothing to show for it.

Yet the Government, in its quest to prolong the reign, have failed to address the situation with pragmatic solutions and progressive steps that would steer the state in the right direction of inclusive growth- the most prominent shortcoming being the failure to harness the potential of the youths- the future of the state. The present social imbroglio which is posing a very real and looming threat of overflowing into an unfortunate and unwanted communal conflict which is solely based on archaic outlook and overriding sense of exclusivism needs to be looked at from a radically different perspectiveone which can bridge the gap and prepare for the future instead of dwelling in the past: literally and metaphorically. Stating that almost, if not all, the problems ailing the present society can be remedied by molding the youths of today to bring about the still elusive change and progress would not be an exaggeration.

No amount of resources or materials can effect change or usher in progress unless those who are to direct and utilize these resources be prepared and groomed to take on the responsibilities and challenges with confidence

A radical mental revolution based on progressive thinking and broadened outlook beyond self preservation and personal enrichment, tempered with the spirit of equality and infused with the dignity of labour is the panacea for our society long festered with enmity, greed, doubts and subdued mindset. The Government should make the most and invest in the one true asset it ever has- the teeming youths who are still at tenterhooks regarding the realization of the innumerable promises and assurances to become a reality. Wasting any more time in pondering over the inevitable steps would only invite further frustrations and agitations

hich never have a desirable ending. Letters, Feedback and Suggestions to 'Imphal Times' can be sent to our e-mail: imphaltimes@gmail.com. For advertisement kindy contact: - 0385-2452159 (O). For time being readers can reach the office at Cell Phone No. 9862860745 for any purpose.

## Continue on Yesterday issued

## 'Women back then would basically go, "Well, if I don't do programming, what else will I do?"

Courtesy The Wire By: Clive Thompson

Their mothers were typically less engaged with computers in the home, they told her. Girls, even the nerdy ones, picked up these cues and seemed to dial back their enthusiasm accordingly. These were pretty familiar roles for boys and girls, historically: Boys were cheered on for playing with construction sets and electronics kits, while girls were steered toward dolls and toy kitchens. It wasn't terribly surprising to Margolis that a new technology would follow the same pattern as it became widely accepted.

At school, girls got much the same message: Computers were for boys. Geeky boys who formed computer clubs, at least in part to escape the torments of jock culture, often wound up, whether intentionally or not, reproducing the same exclusionary behavior. (These groups snubbed not only girls but also black and Latino boys.) Such male cliques created "a kind of peer support network," in Fisher's words. This helped explain why Carnegie Mellon's first-year classes were starkly divided between the sizable number of men who were already confident in basic programming concepts and the women who were frequently complete neophytes. A cultural schism had emerged. The women started doubting their ability. How would they ever catch up? What Margolis heard from students

and from faculty members, toowas that there was a sense in the classroom that if you hadn't already been coding obsessively for years, you didn't belong. The "real programmer" was the one who "had programmer was the one who had a computer-screen tan from being in front of the monitor all the time," as Margolis puts it. "The idea was, you just have to love being with a computer all the time, and if you don't do it 24/7, you're not a 'real' programmer." The truth is, many of the men themselves didn't fit this monomaniacal stereotype. But there vas a double standard: While it was O.K. for the men to want to engage in various other pursuits, women who expressed the same wish felt judged for not being "hard core" enough. By the second year, many of these women, besieged by doubts, began dropping out of the program (The same was true for the few black and Latino students who also arrived on campus without teenage

programming experience.)
A similar pattern took hold at many other campuses. Patricia Ordóñez, a first-year student at Johns Hopkins University in 1985, enrolled in an Introduction to Minicomputers ourse. She had been a math whiz in high school but had little experience in coding; when she raised her hand in class at college to ask a question, many of the other students who had spent their teenage years programming — and the professor
— made her feel singled out. "I remember one day he looked at me and said, 'You should already know this by now,' " she told me. "I thought, I'm never going to succeed.

She switched majors as a result.
Yet a student's decision to stick with or quit the subject did not seem to be correlated with coding talent. Many of the women who dropped out were getting perfectly good grades, Margolis learned. Indeed, some who left had been top students. And the women who did persist and made it to the third year of their program had by then generally caught up to the teenage obsessives. The degree's coursework was, in other words, a leveling force. Learning Basic as a teenage hobby might lead to lots of fun and useful skills, but the pace of learning at college was so much more intense that by the end of the degree, everyone eventually wound up graduating at roughly the same levels

of programming mastery.
"It turned out that having prior experience is not a great predictor, even of academic success," Fisher says. Ordóñez's later experience illustrates exactly this: After changing majors at Johns Hopkins, she later took night classes in coding and eventually got a Ph.D. in computer science in her 30s; today, she's a professor at the University of Puerto Rico Río Piedras,

specializing in data science. By the '80s, the early pioneering work done by female programmers had mostly been forgotten. In contrast, Hollywood was putting contrast, Honywood was putting out precisely the opposite image:
Computers were a male domain. In hit movies like "Revenge of the Nerds," "Weird Science," "Tron," "WarGames" and others, the computer nerds were nearly always young white men. Video games, a significant gateway activity that led to an interest in computers, were pitched far more often at boys, as research in 1985 by Sara Kiesler, a professor at Carnegie Mellon, found. "In the culture, it became something that guys do and are good at," says Kiesler, who is also a program manager at the National Science Foundation. "There were all kinds of things signaling that if you don't have the right genes, you're

A 1983 study involving M.I.T. students produced equally bleak accounts. Women who raised their hands in class were often ignored by professors and talked over by other students. They would be told they weren't aggressive enough; if they challenged other students or contradicted them, they heard comments like "You sure are bitchy today — must be your period." Behavior in some research groups "sometimes approximates that of the locker room," the report concluded, with men openly rating how "cute their female students were. ("Gee, I don't think it's fair that the only two girls in the group are in the same office," one said. "We should share.") Male students mused about women's mediocrity: "I really don't think the woman students around here are as good as the men," one said.

By then, as programming enjoyed its first burst of cultural attention, so many students were racing to enroll in computer science that universities ran into a supply problem: They didn't have enough professors to teach everyone. Some added hurdles, courses that students had to pass before they could be accepted into the computer-science major. Punishing workloads and sses that covered the material at a lightning pace weeded out those who didn't get it immediately. All this fostered an environment in which the students mostly likely to get through were those who had already been exposed to coding — young men, mostly. "Every time the field has instituted these filters on the front end, that's had the effect of reducing the participation of women in particular," says Eric S. Roberts, a longtime professor of computer science, now at Reed College, who first studied this problem and called it the "capacity crisis."

When computer-science programs began to expand again in the mid-'90s, coding's culture was set. Most of the incoming students were men. The interest among women never recovered to the levels reached in the late '70s and early '80s. And the women who did show up were often isolated. In a room of 20 students, perhaps five or even fewer might be

In 1991, Ellen Spertus, now a computer scientist at Mills College, published a report on women's experiences in programming classes.

She cataloged a landscape populated by men who snickered about the presumed inferiority of women and by professors who told female students that they were "far too pretty" to be studying electrical engineering; when some men at Carnegie Mellon were asked to stop using pictures of naked women as uesktop wallpaper on their computers, they angrily complained that it was censorship of the sort practiced by "the Nazis or the Ayatollah Khomeini." desktop wallpaper on their

As programming was shutting its doors to women in academia, a similar transformation was taking place in corporate America. The emergence of what would be called ure fit" was changing the who, and the why, of the hiring process Managers began picking coders less on the basis of aptitude and more on how well they fit a personality type: the acerbic, aloof male nerd. The shift actually began far earlier back in the late '60s, when managers recognized that male coders shared a growing tendency to be antisocial isolates, lording their arcane technical expertise over that of their bosses. Programmers were "often egocentric, slightly neurotic," as Richard Brandon, a well-known computer-industry analyst, put it in an address at a 1968 conference, adding that "the incidence of beards, sandals and other symptoms of rugged individualism or nonconformity are notably greater among this demographic."

There were all kinds of things signaling that if you don't have the right genes, you're not welcome.' In addition to testing for logical nking, as in Mary Allen Wilkes's day, companies began using personality tests to select specifically for these sorts of caustic loner qualities. "These became very powerful narratives," says Nathan Ensmenger, a professor of informatics at Indiana University, who has studied this transition. The hunt for that personality type cut women out. Managers might shrug and accept a man who was unkempt, unshaven and surly, but they wouldn't tolerate a woman who behaved the same way. Coding increasingly required late nights, but managers claimed that it was too unsafe to have women working into the wee hours, so they forbid them to stay late with the men

At the same time, the old hierarchy of hardware and software became inverted. Software was becoming a critical, and lucrative, sector of corporate America. Employers increasingly hired programmers whom they could envision one day ascending to key managerial roles in programming. And few companies were willing to put a woman in charge of men. "They wanted people who were more aligned with management," says Marie Hicks, a historian at the Illinois Institute of Technology. "One of the big takeaways is that technical skill does not equate to success.

By the 1990s and 2000s, the pursuit of "culture fit" was in full force, particularly at start-ups, which involve a relatively small number of people typically confined to tight quarters for long hours. Founders looked to hire people who were socially and culturally similar to

"It's all this loosey-goosey 'culture' thing," says Sue Gardner, former head of the Wikimedia Foundation, the nonprofit that hosts Wikipedia and other sites. After her stint there, Gardner decided to study why so few women were employed as coders. In 2014, she surveyed more than 1,400 women in the field and conducted sit-down interviews with scores more. It became clear to her that the occupation's takeover by men in

the '90s had turned into a selfperpetuating cycle. Because almost everyone in charge was a white or Asian man, that was the model for whom to hire; managers recognized talent only when it walked and talked as they did. For example, many companies have relied on whiteboard challenges when hiring a coder — a prospective employee is asked to write code, often a sorting algorithm, on a whiteboard while the employers watch. This sort of thing bears almost no resemblance to the work coders actually do in their jobs. But whiteboard questions resemble classroom work at Ivy League institutions. It feels familiar to the men doing the hiring, many of whom are only a few years out of college. "What I came to realize," Gardner says, "is that it's not that women are excluded. It's that practically everyone is excluded if you're not a young white or Asian man who's single.

One coder Stephanie Hurlburt was a stereotypical math nerd who had deep experience working on graphics software. "I love C++, the low-level stuff," she told me, referring to a complex language known for allowing programmers to write very fast-running code, useful in graphics. Hurlburt worked for a series of firms this decade, including Unity (which makes popular software for designing games), and then for Facebook on its Oculus Rift VR headset, grinding away for long hours in the run-up to the release of its first demo. Hurlburt became accustomed to shrugging off negative attention and crude sexism. She heard, including from many authority figures she admired, that women weren't wired for math. While working as a coder, if she expressed ignorance of any concept, no matter how trivial, male colleagues would disparage her. "I thought you were at a higher math level," one sniffed.

In 2016, Hurlburt and a friend, Rich Geldreich, founded a start-up called Binomial, where they created software that helps compress the size of "textures" in graphics-heavy software. Being self-employed, she figured, would mean not having to deal with belittling bosses. But when she and Geldreich went to sell their product, some customers assumed that she was just the marketing person. "I don't know how you got this product off the ground when you only have one programmer!" she recalls one client

telling Geldreich. In 2014, an informal analysis by a tech entrepreneur and former academic named Kieran Snyder of 248 corporate performance reviews for tech engineers determined that women were considerably more likely than men to receive reviews with negative feedback; men were far more likely to get reviews that had only constructive feedback, with no negative material.

Lurking beneath some of this sexist atmosphere is the phantasm of sociobiology. As this line of thinking goes, women are less suited to coding than men because biology better endows men with the qualities necessary to excel at programming. Many women who work in software face this line of reasoning all the time. Cate Huston, a software engineer at Google from 2011 to 2014 heard it from colleagues there when they pondered why such a low percentage of the company's programmers were women. Peers would argue that Google hired only the best — that if women weren't being hired, it was because they didn't have enough innate logic or grit, she recalls.
(Concluded)