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Rethinking work in the information age
Impact of computerisation, new technology on employment and welfare

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The excitement began around 1997 when Internet companies and start-ups started redefining Internet as a new communication medium. At that time Internet was virgin territory. It held great promise, but no one was sure when that promise would turn into burgeoning bottomlines.

Traditional media houses were not enthused initially. Internet was an upstart, a medium that was yet to prove its credentials. It was dubbed a digital library, a very useful mailing system and sometimes even dismissed as a pornographic gold mine.

By 1999, newspaper interest in Internet changed from outright disdain to one of grudging interest. Today, there is definitely more respect for the medium though not enough.

Why have media houses treated Internet with such contempt? Why have they been less than warm towards the net? And how has this low-interest approach changed employment profiles in media? More important, how are job roles going to be different now that the net has started sneaking into newsrooms and affecting employment patterns?

To answer these questions, it is important to divide the impact of Internet on media houses into three stages. Each stage has its own story to tell.

Stage I (1997-1998)

This was the period when media houses made their first tentative forays into cyberspace. The reaction was more knee-jerk, than a well-considered decision. The Internet was seen as an appendage of mainstream newspaper work, and not a full-time activity.

There were two reasons for such bizarre behaviour. One, of course and easily explainable, was that the web was seen as an upstart medium. It was not an immediate threat. It was also not a revenue medium, and was unlikely to change profit lines.

Two, was website economics. It cost virtually nothing to set up a website. Domain name registration cost a mere US\$ 70 with Network Solutions. No fancy real estate was needed to set up shop. Moving staff members with little promise to the Internet Division resolved the staffing problem. In fact, the joke was that newsmen who couldn't be fired should be sent to the Internet division. The reason for this was that journalists considered migration to the net a step backward.

The irony could not have been harsher, the logic more convoluted. How could newsmen trained to work for print media write copy for the new media? Were the skills required the same or retraining was called for? These questions were invariably left unanswered.

Staff members pushed from the newsrooms into cyberspace were therefore left to fend for themselves -- a kind of self-learning on the job. For men and women whose understanding of computers was limited to word processing, skills like sizing photographs using Adobe PhotoShop or using Internet languages like HTML to link web pages was no laughing matter.

No one had a clue as to what stories should go on the net. Media websites became cyber-dumping grounds for news that was generated for newspapers. The term that best described this activity was shovelling, not professional selection and hosting.

This was not the end of the story. Newspapers that did not want to invest on a development team chose the even more easier option: outsourcing development work, and further lowering the costs. Few newspapers set up their own development teams.

The only real costs were the server and ISP costs. Here too media houses chose the easier option: hire a server and pay monthly rental and bandwidth cost instead of setting up their own servers. This saved the media houses the bother of paying salaries to development and maintenance teams.

The first media steps on the net were thus purely exploratory in nature. And, not surprisingly, once the website became functional most media houses forgot about their net operations. They were far too involved with the day-to-day running of newspaper empires to worry about the Internet. The investment on the Internet had been made for the future, not today.

Today's bottomlines were generated by the print, and that is where the action was. The logic was yes, we do have a net presence, but we will wait and see how it develops.

Stage II 1999-2000

By 1999, perceptions started changing. The new mood was fired largely by the boom in technology stocks. Suddenly, the Internet revolution did not seem so far away. It seemed nearer, tantalizingly close, but still not close enough.

Publishers started waking up to a new reality. Their websites were not dead investments. Web site traffic figures started being debated in media boardrooms. More than the excitement of owning news-sites attracting large volumes of traffic, a new worry crept in.

The question being asked was: Is the Internet revolution going to change the communication game? Can established media houses allow start-ups to run away with their empires? Will traditional revenue sources like classified advertising move to the net, and away from newspapers?

These were serious questions. The talk changed. It was not enough to be present on the web; it was more important to look at the web as a new medium. But how?

The issues involved were quite complicated. Among the questions that begged an answer were: Should newspapers charge for the content that they place on the net? Should stories be broken on the net, and then followed up in the print? Or will this lead to a fall in circulation figures? And more important: Should it be an integrated operation? That is the traditional journalists work hand-in-hand with new media professionals? Or should it be two different operations altogether?

Media houses started facing one more problem. Journalists suddenly became hot property. Start-ups, especially those which were backed by technology houses, and which were flush with cash thanks to venture capital funding, started poaching on their staffers. It became a major battle to retain trained and experienced staff.

The battle was joined. Newspapers started changing focus. Several newspapers hived off their Internet divisions from the main newspaper and reorganised them as Internet companies. Suddenly, there was a new urgency in the air. There was a whiff of venture capital, and the lure of going public with an IPO. It became a new business, a brave new world altogether.

New Jobs: The change had a great impact on job profiles and job definitions. New jobs with a completely different work focus and skills were created. There was a change in working hours. Unlike newspapers, Internet was a 24-hour medium, and called for people working round the clock.

The work group that was affected the most was newsmen. Technical skills that were considered inessential suddenly became vital. To work as a Content Editor on a website required working knowledge of Internet languages and tools like HTML, PhotoShop, Front Page Editor, pixels, photo resolution etc.

The newspapers were faced with two options: one, organise an in-house training course to update the technical skills of newsmen who were to work on websites; two, hire fresh men and women with a grounding in Internet technology.

Both had in-built problems. Fresh Internet-ready graduates had no experience in journalism. It was difficult for them to judge stories, edit stories or write headlines. On the other hand, those with news backgrounds found hosting a complicated exercise.

Initially, a kind of hybrid model emerged. Newsmen chose stories, rated them on news value, edited and transferred them to their more technology savvy colleagues to host them. This, however, was a painful division of work.

It created within the newsroom two categories of workers, both dependent on each other. From the purely human resources point of view this was quite a serious issue. The question was: Who should be rated more important? Obviously, the answer was that there should be no walls in the newsroom. So, refreshment courses in technology and newsroom skills were called for.

The second work area that called for a new orientation was design. In contrast to newspaper design that has the luxury of space, website design is limited by the size of computer screen. Even more critical is the subject of bytes.

Newspaper designers could play around with images, but on the Internet the download time is directly proportional to the size of the images. So, web designers needed to have an extra dimension. They needed to know the value of bytes, and use new tools like pixels.

Designing also called for one more attribute: the ability to section pages. No website can afford to cram its pages with information. The more information is packed on a single page, the higher is the download time. And if the download time is high, one can be certain that the browser will not wait for the page to appear on his screen.

Here too, newspapers had two options. Train their present designers in the art of web or hire fresh, Internet-ready designers. The first option had limitations. One, it meant relocating a designer who was good in his work to an area where he may not prove as suitable. Two, finding a replacement for him. The obvious and the easy choice were to hire a web designer with the requisite skills. But this was easier said than done. Because the field was too new and there were too few available.

The third work area where media websites needed to hire fresh talent was programming. This is the most critical of all website operations. Here too media houses had the option of diverting their software staff to write programmes or hire new programmers.

Both options were equally viable, as the programming language is the same whether you work on old media or new media. But definitely new positions required to be created, and a highly talented, technical workpool formed.

The fourth area that has been impacted by new technology is revenue generation. Advertising professionals used to traditional methods of marketing space needed to be acquainted with terms like pixels, banners and clickthroughs.

Fortunately, web advertising is not even a fraction of television or print advertising. This has given media houses some breathing space. Most of them are using their existing space marketing staff to generate Internet advertising. But this area too will spin off its specialist personnel soon. This is because the ad man will need a strong grounding in technology to convince a technology-savvy client.

A fifth area that opened up is proving to be the most critical. It is the Ideas Zone. No media website can survive on news-based traffic alone. Media houses have been painfully recognising this need: to turn their news-based websites into complete communication websites.

The Ideas Zone, as I call this gray and ambiguous area, requires staff members who absorb new ideas by surfing the net, who adapt existing brick-and-mortar ideas into exciting online sub-sites, and who research, archive, data-enter and interact with all browsers on a day-to-day basis.

You can designate them as online surfers, idea merchants or plain researchers. But they are needed to both complement and supplement the new team's work.

Finally, one area that cannot be forgotten is partnerships. The way New Media is emerging, it is clear that there is going to be a confluence of media. This may involve partnerships, acquisitions and even mergers. Media companies to maintain their relevance will need individuals to visualise strategic partnerships -- that is individuals who can think ahead. This, by its very nature, will be a senior position at the level of Vice President or General Manager. The Chief Executive may also perform this role.

Impact on remuneration: For newsmen, the web revolution is manna from heaven. They never had it so good. There are more jobs going than available newsmen. Result: Media houses are witnessing a dramatic thinning of newsrooms.

A few reacted by steeply hiking salaries and perks, bringing them at par with dotcom salaries, to stem the outflow. The others are waiting for the dotcom mania to subside, and praying that in the interregnum they don't lose their best and most talented staffers.

But the impact of web companies on newsrooms has been serious. Media houses find themselves in a bind. Their problems are manifold: One, their wage bills have spurted. Two, experienced staffers have left for dotcoms. Three, by hiring staff to man websites they have created a dual wage structure: one for website staff and one for traditional media staff.

Media houses are now veering to the view that they need to spin off their Internet divisions into independent media companies. This enables them to work out a new job chart and a new wage structure, independent of the traditional company.

Fortunately, venture capital for such companies is literally available on tap -- despite the tech stock crash. The VC funding enables companies to pay more to their employees as well as buy technology without dipping into their holding company funds.

Media houses also are considering taking another leaf out of the information technology companies' human resource management. Since the mobility is very high in the field of information technology most companies now provide stock options to their employees. The rider is: these stocks can be cashed only after a certain period of time.

Given their market value, ESOPs (employee stock options) help companies to make the pay packet look bigger than it is. The employee also is happy, as he can make a killing if his company does well.

From the purely HRD point of view too, this is a good option. The employee has a stake in the company. And realises that if he does well the company does well, and vice versa. He is also not in a hurry to leave the company since it may erode his stock portfolio. The same rules apply for Web Designers, Programmers and Systems Administrators. All of them come with a handsome price tag.

Internet companies may take the stock option one step ahead. Besides giving a fixed number of shares to each new entrant, stocks can be linked to employees' productivity. Thus, if a company does well it provides more shares to its employees every year.

There may also be need to resort to other innovative measures adopted by information technology companies. This may include providing dating allowance, marriage allowance, monthly picnics etc.

However, these steps may create divides between new media and old media companies working within the same campus. It therefore makes sense for media houses to insulate their new media companies from the traditional companies to avoid heartburning and possible labour problems. Undoubtedly, for any organisation this is a tricky situation. The earlier they set up new economy companies, and ideally in two different campuses, the better it is for them.

Impact on livelihood: The New Media fortunately has not had a debilitating impact on livelihood. The situation is dramatically different from the catharsis that media houses witnessed when they transited from hot metal to photo typesetting and onto desktop publishing systems.

At that time a lot of job categories just vanished. Proofreaders became extinct. A lot of senior newsmen found themselves sidelined, as they could not adapt to desktop publishing. The same happened to semi-skilled workers used to hot metal systems.

Foremen, typesetters, page makers et al found they were suddenly not needed. From key people, they became redundant, virtual appendages. They were either phased out, given a golden handshake or relocated to positions that were extremely demeaning.

The New Media is a new industry, and not a transformation of the existing brick-and-mortar industry. Also, the change is gradual. It is not telescopic. Even today media websites are not profitable enterprises. Nor are they truly independent operations. They still have to source stories from print media and use print media's space marketing teams to generate advertising.

So, the only impact on livelihood is that Old Media employees who have migrated to New Media are better paid. Those who have not migrated continue to do their jobs as they have been doing-- maybe even benefit slightly, as managements don't mind pampering their existing staff members to make sure they continue with them.

Stage III The Future

The future is always difficult to predict. More so, in the case of New Media. It is a revolution that gathers force with each passing day and no one knows how it will change communication in the foreseeable future.

However, what cannot be denied is that Internet is a civilisational change. It will change the way we transmit news, even change the basic definition of news.

It will also change the media ownership patterns, with cross-media mergers and mutual arrangements dotting the media landscape in the coming years. There will surely be a confluence of media, and the Internet may well become the main vehicle of communication.

So, what changes can be visualised? How should media houses prepare for the impending changes? More so, how should employees avoid getting irrelevant?

Of the three traditional forms of mass media, print will be the most badly affected. It is a media that is fast outliving its utility. It is not that the print media will die. But it will certainly shrink. The first to go will be the smaller newspapers. Gradually, the pressure will mount on number five, number four and number three newspapers to close shop. Only one or maybe two newspapers will survive in each city. The others will either migrate to the net, merge with larger entities or simply close down.

It is not that net alone will be responsible for the closure of a large number of newspapers. But the newspapers will collapse under their own weight. Already publishing is becoming a more and more difficult enterprise.

The economies of scale have neither worked nor will ever work in favour of the newspaper. The newsprint cost will continue to go up, and it is difficult to visualise a scenario where this trend may reverse. The printing costs too will maintain their upward graph, and so will the manpower expenses. One should also not forget the costs and manpower involved in taking the newspaper to a reader's doorstep. This itself is a hugely expensive and cumbersome operation.

In contrast, web publishing involves a small team, no newsprint costs, no printing costs and no distribution costs. Yes, of course, web will need high investment in technology, and exploding bandwidth costs, which is going to be the most critical area in the growth and reach of websites. But these are resources that are not as prohibitive and backbreaking as newsprint and printing costs.

The model that is likely to emerge is that media houses will break stories on the web, television will follow up the stories through the day and newspapers will provide only backgrounders and analysis. That is instead of being a news medium, newspapers may turn into a views medium.

Impact on employment: The layoffs will be the highest in printing and circulation areas. Printing especially requires technical skills, and the printing department has a huge reservoir of trained print personnel. It is these highly skilled workers who will find survival in the New Economy difficult. They will suddenly find that they have the skills, but no jobs.

Circulation departments, which have built large grassroots level distribution networks, too will feel the pinch. There will be a shrinking of operations, and even closure in cases of newspapers that move to the net. The attrition rate will be very high here too.

Newspapers will be left with two options. Extend a golden handshake to its printing and circulation staff or handpick the brighter ones for new roles in administration or marketing.

Either way the changes, as and when they come, will lead to a lot of bloodletting on the circulation and printing front.

Even the newsrooms will face the pressures of adapting to the new medium. The basic concept of news will be redefined. Just as television forced newsmen to look for news beyond the news to keep the newspapers fresh and relevant, Internet will force them to reinvent the news.

Another possibility, which is also very likely, is that Internet will set the news agenda. That is the Internet teams will react like television teams to developing news. They will provide constant updates that will be hosted on the sites. These web reports will be backed by digital imaging, that is photographers will be equipped with digital cameras instead of still cameras, to enable instant hosting of photographs.

At the same time, a back-up team of newspaper writers will analyse developments for being carried in the print. Experienced newsmen, who can put together breaking strands into a comprehensible analysis, will be in great demand. This means that there will be a division of work: news developments will be handled by web newsmen and news analysis by print newsmen.

In contrast, radio and television news operations will not go through a similar cathartic change. These two media, in any case, are putting out the developing stories as they are breaking. Their news teams will continue doing the same job. Their web investment will therefore be more on technology than on manpower. In other words, live audio and video will be routed directly to the net.

But there will definitely be a confluence of media. That is media houses through tie-ups or mergers will provide text, audio and video feeds on the net. These feeds will be beyond news. The websites will build up huge information databases and provide extensive entertainment clips as streaming audio and video.

It is unlikely that newspapers will set up audio or television divisions. What is more likely is that they will exchange news stories for audio and videos from radio and television houses. There will also be buying of software from music and film houses, to provide exclusive streaming.

The creation of jobs will therefore be more at the high-end -- largely technology related for enabling of audio and video acquisitions.

The future therefore is very exciting. Much, of course, will depend on how the technology changes and how fast countries improve connectivity. But one thing is certain. For the first time, it is the common man who is going to benefit. He will have the best of all worlds.

In the media world those who will survive and benefit from the change are: newsmen who have migrated to the net, analysts who can look beyond the news, photographers who can handle digital cameras, space marketing professionals who have mastered the new rules of Internet advertising and technology wizards in the field of programming, designing and systems administration.

The ones who will lose most are the circulation and printing staff, old world scheduling staff and advertising personnel who have failed to shake off their old world anchoring.

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