**A DIFFICULT TRANSITION FOR THE WORKFORCE**

As advancing technology shapes our future, the workforce will increasingly be divided into winners and losers. The losers will be those who focus largely on routine, predictable tasks, regardless of whether these activities are physical or intellectual in nature, and often independent of educational level. The winners are likely to fall into one of three general groups. First, skilled trade workers, such as plumbers and electricians, who do work that requires dexterity, mobility and problem-solving ability in highly unpredictable settings. The same is true for a care worker who assists an elderly person with his or her daily needs. This type of work is far beyond the capability of any existing robot and these jobs will remain safe for the foreseeable future. Second, those workers whose occupations require the development of deep, sophisticated relationships with other people will be relatively safe. This might include nursing, or business or educational occupations that require complex human interactions. While AI is making progress in this arena, it is likely to be a long time before machines can form truly meaningful relationships with humans. The final category includes intellectual work that is creative or activities that are non-routine and unpredictable in nature. For these workers, artificial intelligence will be likely to amplify, rather than replace, their efforts.

Within many professions, a winner-take-all scenario might unfold; the most creative individuals will rise to the top, while those focused on more routine activities will face a growing threat from automation. The best advice for individuals is to transition from routine, predictable work and towards one of these winning categories. There are real questions, however, about the viability of this advice when applied to society as a whole.

Historically, advancing technology has tended to drive most workers from routine work in one sector to routine work in another. As agriculture became mechanised, workers moved from farms to factories, but they continued to do routine work. Later, workers moved to routine jobs in the service sector. The rise of artificial intelligence will require an unprecedented transition in which a large fraction of the workforce will have to find and adapt to roles that are genuinely non-routine. Many workers will probably lack the inherent talents and personality traits required to take on creative or relationship-based roles.

Designing a society that can adapt to the rise of artificial intelligence and allow everyone to thrive as these changes unfold will be one of our most significant challenges in the coming years. It will require an emphasis on retraining and education for those workers who can realistically undertake the necessary transition, as well as an improved safety net for those who will inevitably be left behind.

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