

List of hypotheses relating to topics covered in the interviews

(The hypotheses in red are ones added in the course of the interviewing).

CAREER

Car001. ECRs are employed on short-duration, contract-based, non-tenure tracks, a state of affairs that renders them particularly prone to hiring freezes and layoffs resulting from the pandemic.

Car002. The pandemic has seen ECRs passed over for jobs.

Car003. The pandemic has made it difficult for ECRs to hold on to their job.

Car004. Only a traditionally-defined stellar research record - in terms of publications in first-line journals, grants and citations - can bring about the securing of a tenured position.

Car005. Getting a good (tenured) job is ECRs' major motivation.

Car006. ECRs are committed to their chosen vocation; even in the face of a pandemic that puts them in a more precarious position than ever, they hold on to their academic aspirations.

Car007. ECRs, well-aware that they may find themselves at the sharp end of the pandemic-triggered financial problems in the academic world, are very concerned about their career prospects.

Car008. ECRs' career prospects have already suffered because of the pandemic-incurred hardships.

Car009. The pandemic has opened up new career opportunities for ECRs.

Car010. ECRs who work with other disciplines have more opportunities for career progress brought about by the pandemic.

FUNDING

Fund01. Despite anticipated and/or actual cutbacks in research funding from governmental and private agencies, there are no changes to the amount of research funding available to ECRs.

Fund02. Despite anticipated and/or actual cutbacks in research funding from governmental and private agencies, more funding has been available to ECRs.

Fund03. Despite anticipated and/or actual cutbacks in research funding from governmental and private agencies, more funding has been available to ECRs whose research is COVID-related.

Fund04. With funding having been redirected to COVID-related research, less funding has been available to ECRs.

Fund05. ECRs are not the ones tasked with obtaining research funds.

ASSESSMENT

Ass001. ECRs are formally assessed by their institutions on the basis of their publishing record.

Ass002. ECRs are formally assessed by their institutions on the basis of their citation-based metrics record.

Ass003. ECRs are formally assessed by funding agencies on the basis of their publishing record.

Ass004. ECRs are formally assessed by funding agencies on the basis of their citation-based metrics record.

Ass005. ECRs are not assessed by their institutions on the basis of altmetrics.

Ass006. ECRs are not assessed by funding agencies on the basis of altmetrics.

Ass007. ECRs are not assessed by their institutions on the basis of their work's openness and transparency factors, such as open access, open data and outreach.

Ass008. ECRs are not assessed by funding agencies on the basis of their work's openness and transparency factors, such as open access, open data and outreach.

Ass009. ECRs would like to be judged on the openness, collegiality and transparency of their research behaviour, too.

Ass010. The criteria/methods of institutions' assessment of ECRs have not changed as a result of the pandemic.

Ass011. The criteria/methods of funding agencies' assessment of ECRs have not changed as a result of the pandemic.

Ass012. ECRs judge the success of their peers as a researcher on the basis of their citation record/by means of citation-metrics.

Ass013. ECRs judge the success of their peers as a researcher on the basis of their altmetrics indicators record/by means of altmetrics.

Ass014. ECRs are formally assessed by their institutions on the basis of their record in obtaining funds.

Ass015. ECRs are formally assessed by their institutions on the basis of their teaching.

RESEARCH ENVIRONMENT

Env001. ECRs are well aware they have to adhere to the metric-based/ journal-centred publishing dictates of the scholarly system in order to climb the academic ladder.

Env002. ECRs place much effort on the research-related aspects of their scholarly work, well aware that they are judged by their academic achievements. The pandemic has not changed this state of affairs.

Env003. As academics are typically recruited, promoted and obtain funding on the basis of their publication record and citation scores, ECRs cannot afford to opt for disruptive initiatives in their research work. The pandemic has not changed this state of affairs.

Env004. As research ‘apprentices’ or ‘slaves’, ECRs have little freedom to pursue their scholarly interests.

Env005. ECRs adopt the research practices of their mentors and heads of groups to which they belong.

Env006. ECRs adopt the communication/networking practices of their mentors and heads of groups to which they belong.

Env007. ECRs adopt the reputation building practices of their mentors and heads of groups to which they belong.

Env008. ECRs would like to use social media platforms and applications/altmetrics more, but they are well-aware that they will be measured on traditional norms for tenure/promotion.

Env009. ECRs see social media platforms and applications as useful for research purposes.

Env010. ECRs see social media platforms and applications as useful for reputational purposes.

Env011. ECRs see social media platforms and applications as useful for communication/networking purposes.

Env012. Twitter is now the social media application of choice for ECRs.

Env013. The focus on fast and major research achievement has created for ECRs a climate of constant rush and fear of lagging behind, more so since the pandemic brought about a scarcity of jobs in academe.

Env014. The pandemic has not led to significant changes in the direction of ECRs’ research.

Env015. ECRs whose research area is interdisciplinary, transdisciplinary, or multidisciplinary have benefited during the pandemic from the ability to change the direction of their research to an emerging area.

Env016. ECRs are mentored formally.

Env017. ECRs are mentored informally.

Env018. ECRs obtain training in research work.

Env019. Interdisciplinary, transdisciplinary, or multidisciplinary research encouraged/attractive for ECRs.

Env020. ECRs see participation in conferences as useful for reputational purposes.

Env021. ECRs see participation in conferences as useful for research purposes.

RESEARCH WORK PRACTICES

Work01. ECRs are heavily involved in the various aspects of research work.

Work02. The pandemic has led to re-organisation in work place/role, resulting in ECRs' becoming overworked.

Work03. The pandemic has led to re-organisation in work place/role, resulting in ECRs' becoming undervalued.

Work04. ECRs' total working hours have decreased during the pandemic.

Work05. The time ECRs devoted to research has decreased during the pandemic.

Work06. ECRs' research has been hindered during the pandemic because of the inability to perform experiments.

Work07. ECRs' research has been hindered during the pandemic because of the inability to do field work.

Work08. ECRs' research has been hindered during the pandemic because of the inability to access non-digitised resources housed in libraries.

Work09. ECRs' research has been hindered during the pandemic because of the less convenient opportunities to discuss ideas with their lab head/principal investigator (PI).

Work010. ECRs' research has been hindered during the pandemic because of the less convenient opportunities to discuss ideas with their colleagues.

Work011. ECRs had difficulty to keep up with work during the pandemic, and in particular during lockdowns, especially ECRs who had caring duties.

Work012. With lockdowns keeping them at home, ECRs had more time/opportunities for data analysis during the pandemic.

Work013. With lockdowns keeping them at home, ECRs had more time/opportunities for writing during the pandemic.

Work014. With lockdowns keeping them at home, ECRs had more time/opportunities for working on grant or fellowship applications during the pandemic.

Work015. ECRs' research has been hindered during the pandemic because online teaching turned out to be so time-consuming.

Work016. ECRs' research has been hindered during the pandemic because of difficulties with obtaining lab equipment/supplies.

Work017. ECRs' research has been hindered during the pandemic because they/their team members/their families/the participants in their projects came down with COVID.

Work018. With lockdowns keeping everybody at home, it became easier to enroll/reach/assess participants.

Work019. ECRs see to it that their results are reproducible.

Work020. With lockdowns keeping them at home, ECRs had more time/opportunities for updating their profiles/showcasing their achievements on social media.

RESEARCH PRODUCTIVITY

Prod01. ECRs are productive researchers and prolific authors.

Prod02. ECRs' levels of self-perceived productivity have dropped during the pandemic.

Prod03. Women ECRs have experienced greater drops in levels of self-perceived productivity during the pandemic than their men colleagues.

Prod04. ECRs with caring duties experienced greater drops in self-perceived productivity during the pandemic.

INFORMATION DISCOVERY, USAGE AND EVALUATION

Disc01. Google, Google Scholar and PubMed are the key services used by ECRs for information seeking purposes.

Disc02. ECRs use the smartphone to search for scholarly information.

Disc03. ECRs do not use the smartphone to read scholarly information.

Disc04. The pandemic has resulted in an increase in the use of smartphones by ECRs for research purposes.

Disc05. During the pandemic preprints have become for ECRs a normative way to obtain/use research.

Disc06. ECRs increasingly search for/use informally disseminated, early-stage/interim research results, data, code or related outputs.

Disc07. ECRs treat informally disseminated communications, such as blogs and posters, with a pinch of salt.

Disc08. ECRs only treat as evidence informally disseminated communications, such as blogs and posters, when these are associated with formal publications.

Disc09. Formal publications as sources to build on retain their importance for ECRs.

Disc010. Metrics are used by ECRs to discover must-read papers.

Disc011. ECRs do not make use of their learned societies and their publications to discover new knowledge.

Disc012. ECRs do not appreciate the support available to them from librarians in their information discovery, usage and evaluation needs.

Disc013. Libraries in their role as information-mediators retain its importance for ECRs.

Disc014. ECRs are aware of questionable research practices in their field.

Disc015. ECRs believe that questionable behaviour has become more prevalent since the pandemic.

Disc016. ECRs hold with the view that making available research results quickly and openly is at expense of quality and reproducibility.

Disc017. Looking for convenient access to formally published information, ECRs turn to illegal sites, too.

RESEARCH DISSEMINATION/PUBLISHING

Pub001. Publishing in formal venues is as important as ever for ECRs.

Pub002. During the pandemic preprints have become for ECRs a normative way of disseminating research.

Pub003. During the pandemic more informal modes/channels of communication have been gaining traction among ECRs.

Pub004. ECRs have a say the process of selecting the formal channel in which to publish the work of their research group.

Pub005. ECRs rely on quantifiable metrics to determine where to publish.

Pub006. ECRs are involved in and contribute to a wide range of authorship tasks.

Pub007. ECRs are subject to an institutional authorship policy regarding the order in which the authors of an article are to be listed.

Pub008. ECRs are subject to an authorship policy according to which authors are listed according to the weight of their contributions to an article.

Pub009. ECRs are subject to funder policies that specify the publishing venues to which their work is to be submitted.

OPEN ACCESS PUBLISHING

OpA001. ECRs appreciate the underlying principle of OA - equal access to knowledge.

OpA002. As readers, ECRs appreciate the benefits of OA publishing.

OpA003. As authors, ECRs appreciate the benefits of OA publishing.

OpA004. With publishers' making virus-related articles freely available during the pandemic, ECRs' appreciation of OA publishing has grown.

OpA005. ECRs see OA as especially beneficial for career progression.

OpA006. ECRs prefer to publish OA but only if they have the funding.

OpA007. It is PIs, rather than ECRs, who decide whether to publish OA, mainly because of the need to pay APC.

OpA008. APCs are no deterrent for ECRs (or rather their groups) when deciding to opt for publishing OA.

OpA009. The take-up of open access publishing has been accelerating among ECRs because of the speedier publication process it affords.

OpA010. For ECRs open access publishing platforms are no replacement for traditional journals.

OpA011. ECRs place the final, peer reviewed version of their articles in repositories.

OPEN DATA

Odat01. ECRs are reluctant to share data and software they produced as part of their research for fear of losing their competitive edge.

Odat02. ECRs are reluctant to share data and software they produced, seeing the practice as a risk to career advancement as data sharing not generally rewarded by current reward systems.

Odat03. ECRs who share data and software they produced want these to be valued separately from their publications.

PEER REVIEW

Peer01. ECRs benefit from peer review mainly because it enables them to improve their own work.

Peer02. While ECRs do not see the current peer review system as perfect, they prefer the double-blind peer review to prevent bias.

Peer03. ECRs are not aware of the initiatives for quicker and more efficient peer review procedures developed for COVID related research dissemination.

Peer04. During the pandemic, ECRs submitting non-COVID-related manuscripts to journals have experienced longer delays in responses from publishers/reviewers.

Peer05. During the peer review process, ECRs experience a wide range in the quality of reviews.

Peer06. ECRs undertake peer reviewing of their peers' work because they find it a good learning experience.

Peer07. ECRs undertake peer reviewing of their peers' work despite the time-consuming nature of the process.

Peer08. ECRs get no training for doing peer review.

Peer09. ECRs would appreciate training in doing peer review.

Peer010. ECRs rely on their own experience of undergoing peer review when they review their peers' work.

Peer011. Peer review has grown in importance in the eyes of ECRs in the wake of the growing prevalence of hurriedly executed, scientifically inadequate, insufficiently vetted studies.

Peer012. ECRs do not give automatic trust to peer reviewed content; they rely on their own experience-based judgement, too.

Peer013. ECRs believe that peer review systems need reform.

Peer014. ECRs believe that incentivizing reviewers' time (e.g., monetarily, credit in annual reviews) can improve the peer review process.

Peer015. ECRs shy away from open peer review despite their appreciation of openness and transparency.

Peer016. While ECRs do not see the current peer review system as perfect, they do think it functions reasonably well and does what it should do.

SHARING AND COLLABORATING

Shar01. ECRs consider sharing and collaborating important components of research work.

Shar02. ECRs share and collaborate a lot, if stopping short of risking their competitive edge.

Shar03. The pandemic has brought to the fore the benefits for ECRs of rapid, informal ways of knowledge-sharing.

Shar04. The lockdowns motivated ECRs to form ties with their peers and with their colleagues for purposes other than collaboration, such as sharing tools.

Shar05. With little if any travel possible during the pandemic, video conferencing platforms have been taking the place of face-to-face meetings, which resulted in an increase in their use among ECRs.

Shar06. With little if any travel possible during the pandemic, so that video conferencing has been taking the place of face-to-face meetings, ECRs attend more professional events.

Shar07. ECRs do not see the travel-bans induced shift to online conferencing as fully capable of taking the place of face-to-face events, despite its affordances, such as the ability to connect with colleagues locally and globally, whilst saving valuable time spent on travel.

Shar08. ECRs denounce the travel-bans induced shift to online conferencing, which is seen as an impediment to their ability to socialize, network, collaborate and gain the attention, recognition and feedback of their colleagues.

Shar09. ECRs reserve their support for the travel-bans induced shift to online conferencing to those instances when their funds are too limited to allow for attending face to face events.

Shar010. The pandemic has adversely affected ECRs' collaboration opportunities.

REPUTATION BUILDING

Rep001. ECRs consider building up an impressive publishing record essential to reputation building.

Rep002. ECRs consider building up an impressive citation record essential to reputation building.

Rep003. ECRs consider altmetrics helpful for monitoring their impact.

Rep004. ECRs consider altmetrics helpful for showcasing their impact.

Rep005. ECRs opt for OA publishing because of its reputation-building capability of reaching bigger/wider audiences and thereby increasing visibility.

OUTREACH

OutR01. ECRs are expected to make their research comprehensible to researchers in fields other than their own.

OutR02. ECRs are expected to make their research comprehensible to practitioners.

OutR03. ECRs are expected to reach out to the general public and policy formers/government to initiate change and inform policy making.

OutR04. ECRs are coming to recognise the importance, for policy-making purposes, of reaching out to the public with their results.

OutR05. ECRs are coming to recognise the reputation-building benefits of reaching out to the public with their results.