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Between cosmopolitanism and parochialism: return migration of early-career Israeli academics

Emil Israel^{1,2*}  and Nir Cohen³

*Correspondence:
emil.israel@technion.ac.il

¹ Faculty of Architecture
and Town Planning, Technion
– Israel Institute of Technology,
32000 Technion City, Haifa, Israel

² Samuel Neaman Institute
for National Policy Research,
Technion City, Haifa, Israel

³ Department of Geography
and Environment, Bar Ilan
University, Ramat Gan, Israel

Abstract

Mobile academics have traditionally been conceived as cosmopolitan subjects who favor cultural diversity and search for new professional opportunities abroad. Their return to the homeland could therefore be interpreted as a sign of parochialism, which narrows down their professional opportunities and limits their exposure to global resources. In this article, we compare returning and non-returning academics with respect to their parochial and/or cosmopolitan tendencies. Drawing on a sample of 223 Israeli Early-Career Researchers (ECRs), we examine their cosmopolitan—or otherwise parochial—propensities and assess the effect they have on their return decisions. We use statistical tests to analyze the effects of cultural orientation, attachment to the homeland-based national community, and patriotic feelings on their propensity to return. Our findings suggest that in comparison with their co-nationals who opted to remain abroad, returning ECRs exhibit higher levels of parochialism, reflected through *inter alia* stronger communal dispositions and patriotic attachment as well as geographically limited job search.

Keywords: Early career researchers (ECRs), Return migration, Cosmopolitanism, Parochialism, STEM, Israel

Introduction

Research on academic migration has increased in recent years (Bauder, 2015). Reflecting a broader interest in the internationalization of higher education (Brooks & Waters, 2011), studies on academic, or scientific, mobility (Musselin, 2004) examine cross-border trajectories of individuals engaged in knowledge production. These migrants, whether (under)graduate students, postdoctoral fellows or (non)tenured faculty, are theorized as carriers of human capital who are indispensable for the development of sending and receiving countries (Ackers, 2005; Lowell & Findlay, 2001; Williams & Baláž, 2014).

Early studies posited that academic migration was driven by the quest for accumulation of cultural capital, credibility, and prestige, and that it was “stimulated by a desire for *professional socialization*” (Mahroum, 2000, p. 26). Recent studies present a more complex picture, showing that the mobility of academics is motivated by numerous pecuniary and non-pecuniary considerations, impacted by their variegated

profiles and biographies, and abided by intersecting and even conflicting logics (Saint-Blancat, 2018; Yang, 2016). Academic mobility, thus, comes in different shapes and forms (Cantwell, 2012; Robertson, 2010), and is “constrained and conditioned by the regional and international political and economic relations of power” (Kim, 2009, p. 387).

While *some* academics may choose—or be forced—to repatriate at the end of their *stint abroad* (Morano-Foadi, 2005), little attention has been paid to the structural forces and agentic considerations drawing them back ‘home’ (but see Gill, 2005;). A few recent studies have shown that like departing scientists, returnees’ decisions are based on a combination of social, cultural and economic considerations associated with either home (e.g., supportive networks, elderly parents, or recruitment by higher education institutions) or host (e.g., children growing up away from extended families, or professionally struggling spouses) countries (Gaulé, 2014; Gill, 2005; Israel et al., 2019; Sabharwal & Varma, 2016).

However, none of these studies framed return in relation to the worldly outlook—or lack thereof—of repatriates. Narratives of out-migrating academics (students and faculty) are often embedded within a cosmopolitan discourse, which favors global cultural exposure and openness to social interactions in diverse settings (Kim, 2009). Foreign universities, where they study, research, and teach, are positively ‘imagined as engines of cosmopolitanism and harbingers of peace’ (Friedman, 2018: p. 248). Against this backdrop, return seems anomalous; why would *some* educated, open-minded individuals, who put a high premium on international experience, choose to repatriate?

Traditional economic theories are of little help here, since they explain return as a failure of the migration experience (Neo-Classical Economics), or a sign that it has met its objectives (New Economics of Labor Migration). However, neither explanations account for the social and institutional environment in the home country, nor the personal orientations of returnees. More useful here is the structuralist approach, which embeds agentic positions in local power relations, traditions, and values (Cassarino, 2004). Arguably, then, not *all* mobile academics are equally predisposed to diverse cultural experiences or subscribe to the idea of a global academic community (Guerin & Green, 2016). These individuals, termed here *parochial academics*, retain a high degree of socio-cultural and emotional attachment to their homeland, and are therefore more likely to repatriate. In contrast, faced with similar conditions in host/home countries, *cosmopolitan academics*, who are open to divergent cultural experiences, and ‘search for contrast rather than uniformity’ (Hannerz, 1990: 239, would likely remain abroad. While *parochial(ism)* and *cosmopolitan(ism)* have taken quite different meanings over time, as the literature review below demonstrates, in this article we adopt a broad geographical interpretation of the terms, which resonates with the cultural discourse on globalization. Following Ley (2004), we conceive of cosmopolitans as individuals who ‘[T]hink globally, aim to exceed their own local specificities, welcome unfamiliar cultural encounters, and express the wish to move toward a true humanity of equality and respect, free of racial, national, and other prejudices’ (p. 159). In contrast, the parochial individual ‘[V]alues the local, its culture and solidarities, as a moral starting point’ (Tomaney, 2013:159). Needless to say,

our understanding and use of ‘parochial’ and ‘cosmopolitan’ are intended for analytical purposes only and should not be read as judgmental or value laden.¹

This paper sets out to explain the differences between returning and non-returning scientists, in terms of their worldly orientation. Drawing on a comprehensive survey conducted among Israeli ECRs in STEM disciplines, we argue that their return decision is correlated to their socio-cultural orientations. Specifically, we predict that returning migrants, who subscribe to a parochial outlook, would attribute higher importance to place-based, localized, and ideological considerations, including national-patriotic sentiments, compared with their non-returning, cosmopolitan co-nationals. We furthermore expect the latter group to engage in a geographically broader job search, aimed at maximizing their economic potential, as well as attribute lower levels of importance to social and familial considerations associated with their homeland.

The study makes a threefold contribution to the literature on academic mobility; first, by focusing on ECRs, it explores return migration among an academic sub-group that has received little attention thus far. In this respect, we concur with Ackers (2005, p. 108) who noted that while students are greater in numbers, the mobility of young researchers ‘may be of greater concern’ due to their potential scientific contribution; second, by pointing to the link between cultural orientations of academics and their return decisions, the paper challenges their traditional conceptualizations as flexible agents who are predisposed to sustained cultural adventures and freely roam the global labor market in a quest for research opportunities; finally, understanding return proclivities among ECRs may be useful for countries which face economic repercussions due to massive departure of academics. Early identification of those more likely to return could allow national administration a more cost-efficient allocation of their return-oriented resources (e.g., repatriation programs).

The paper contains five sections. First, we review the literature about mobility and cosmopolitanism, showing how the two concepts are theoretically intertwined. We then present our hypotheses and describe our methods, including data collection and analysis. Following a discussion of academic mobility in Israel, we present and interpret the results of our analyses. We conclude by discussing avenues for further research on the nexus between cosmopolitanism and scientific (return) migration.

Cosmopolitanism and (academic) mobility

Scholarship on cosmopolitanism has risen in recent decades (Delanty, 2012). Etymologically rooted in ancient Greek (*kosmou politês*) and later critiqued by Marxists as a new understanding of cross-national (capitalist) interdependency, the term was popularized by globalization scholars. It was theorized as a worldview and trans-national political project, but also as a manifestation of multiple affiliations, cultural orientations and attitudes, or a mode of practice, skill, or competence (Vertovec & Cohen, 2002). Consequently, it has ‘[A]cquired so many nuances and meanings’, and nearly lost its relevance ‘in the face of an out-of-control free-market liberalism’ (Harvey, 2000: 529).

Fundamentally, cosmopolitanism is a form of global citizenship that is synonymous with worldwide values. As Nussbaum (1994) reminds us, it was traditionally understood

¹ It should also be noted that the two terms are not binary opposites but represent two poles of a broad continuum.

as a subjective claim to evade local origins and group membership, allowing one to define '[H]imself in terms of more universal aspirations and concerns' (p. 3). It was typically portrayed as the binary opposition of parochialism, namely the inability or unwillingness to adopt a global perspective, confining oneself to a narrow viewpoint that prioritizes the local, proximate, and familiar. Liberal cosmopolitanism, Warf (2012: iii) contends, '[S]tands in sharp contrast to ideologies such as racism, religious fundamentalism, and nationalism, which emphasize and often exaggerate or oversimplify the difference among human beings at the expense of their common humanity'. For critical geographers, a parochial outlook is undesirable, because it could lead to an essentialized and reactionary politics of place, or 'militant particularisms' (Harvey & Williams, 1995: 95).

Conceiving cosmopolitanism as the exclusive domain of (mostly white, upper-middle class, urban) subjects detached from local roots, was critiqued as an elitist, abstract idea that ignores the socio-historically and geographically diverse contexts within which different cosmopolitan formations emerge (Harvey, 2000; Mingolo, 2000; Söderström, 2006). In this context, Prakash (2017), calls for 'multiple and discrepant actually existing cosmopolitanisms' that are rooted in the experience of various subaltern communities, and Gidwani and Sivaramakrishnan (2003: 345) see it as the ability '[T]o straddle a political world of difference' that takes place 'in rural, urban, or metropolitan settings', not always serving a progressive agenda. Similarly, Tomaney (2013), defending parochialism 'from the condensation of the cosmopolites' (p. 659), argues that it should be understood as 'a site for the development of virtues, including commitment, fidelity, civility and nurture', a means to live in a mobile world, 'shaped by global cultural and material flows' (p. 669).

Mobility is widely considered cosmopolites' most salient feature. Migration, but also business travel, tourism, and international studentship reflect—and usher in the production of—cosmopolitan skills and outlooks. As Glick Schiller (2015:107) contends, 'such mobile individuals acquire a unique set of analytic, emotional, creative/imaginative and behavioral competencies and skills that distinguish them from those who have not travelled'. Beck (2008) sees *cosmopolitanization* as a non-elitist concept, which derives in part '[F]rom the dynamics of...mobility and migration', leading to '[N]ew relations, new civilities, and new mobilities' (p.27).

While some scholars have noted the need to acknowledge the cosmopolitan qualities of different mobile subjects (Glick-Schiller, 2010; Sheller, 2011), like African slaves or migrant workers (Prakash, 2017), the term is still primarily associated with privileged international mobilities. From business-owning migrants to international students (Cheng, 2018; Matthews & Sidhu, 2005; Pécoud, 2004), cosmopolitanism frames the research about the experience of only *some* mobile groups.

Chief among these are academics, whose mobilities are among the fastest-growing topics within the literature on skilled migration. Early studies conceptualized academic mobility as motivated by the quest for prestige, and the "desire for *professional socialization*" (Mahroum, 2000, p. 26). Recent studies, however, have shown that their mobility is "anything but a linear process" (Sabharwal & Varma, 2016, p. 177), arguing that academics are driven by a mix of socio-cultural, economic, emotional, and ideological considerations, impacted by personal and familial biographies (Bauder, 2015; Czaika &

Toma, 2017; Musselin, 2004), and subjected to variegated, sometimes conflicting, logics (Saint-Blancat, 2018; Yang, 2016).

Most studies on academic mobility focus on outward migration. Despite evidence that *some* academics repatriate (in)voluntarily, motivated by personal, professional, and structural factors associated with home and host countries, little attention was paid to academic return (but see Harvey, 2000; Sabharwal & Varma, 2016; Wang et al., 2015). Demographic characteristics, including gender, age, marital status, and level of education, play a role in return decisions of academics, but also professional factors like unsatisfactory employment or vague career prospects (Zweig, 1997). Family-related attributes significantly affect return decisions (Khoo et al., 2008). Gill (2005) found that Italian scientists' return decisions were motivated by personal considerations (mostly having children or ailing parents, or professionally struggling spouses). Other factors include extended family and lifestyle preferences (Harvey, 2000; Labrianidis & Vogiatzis, 2013). Contextual and structural forces are frequently cited as important considerations by highly skilled returnees, academics included. In host countries, xenophobic and racist attitudes, labor market discrimination, economic downturns, and restricting immigration policies are associated with repatriation (Jeffery & Maurison, 2011). In home countries, corruption, limited employment opportunities or geopolitical instability dissuade academics from repatriating (Cohen & Kranz, 2015; Teo, 2011), while tax incentives generally have a (small but) positive effect on ambivalent academics (Cohen, 2009).

The role of emotional connection to one's birthplace in the decision to repatriate has long been acknowledged by migration scholars (Sjaastad, 1962). Yet, evidence of its role in academic return has been sporadic at best (Alberts & Hazen, 2005). One of Gill's (2005) informants, for example, who returned to Italy, noted her national sentiments, arguing it is the (only) place she 'would feel more at home' (p. 333). Similarly, scientists interviewed by Sabharwal and Varma (2016) expressed a 'general attachment to their home country' (p. 181) as a key, though not exclusive, reason to return.

The scarcity of research about the role of homeland attachment in return of academics is perhaps not surprising. Academics, primarily scientists, are often perceived as highly dedicated professionals who are indifferent to emotional considerations. More importantly, (self)-assertions of science as having *no nationality* (Cheng, 2018) or *knowing no borders* are instrumental in maintaining its image as a multi-territorial project pursued in largely de-nationalized institutions, 'the antithesis of the older national flagship university, which focused on the production of...national elites' (Baker, 2014: 86). Mobile academics are perceived as members of an imagined global community characterized by openness to cultural differences, self-reflexivity, and civility, and 'are able to float above parochialism, producing knowledge detached from national politics or interests' (Friedman, 2018: 249).

Such perceptions persist even in the face of evidence to the contrary (Kirpitchenko, 2014). Thus, Friedman (2018), exploring narratives of banal nationalism among administrative staff at US-based research universities, dispels their myth as beacons of de-nationalized cosmopolitanism. Siegert (2011), studying Russian academics in Germany, found that while most groups ('global scientists', 'individualists' and 'Germanophiles') identified with their profession or with Germany, the group of 'patriots' identified with

their homeland and retained high levels of attachment to it. Curiously, patriots' parochial perspective was employed to minimize the risk of them not returning to Russia.

However, little research exists about the links between academic return mobilities and cosmopolitanism, or parochialism. Specifically, not much is known about how cosmopolitan sentiments shape scientists' return decisions. Given the importance of mobility for scientists' career, primarily in its early stages, examining the factors which accelerate or inhibit scientific (return) migration is imperative.

The empirical method

The hypotheses

Hypothesis 1 Return decisions are associated with the cultural preferences of early career researchers (ECRs). Importance is given to place-based, localized, and ideological concerns, national-patriotic sentiments and local traditions and values, among other things.

The dependent variable in this hypothesis is the location decision of the ECR. The independent variables are defined as the importance assigned by the ECR to various characteristics of the location they chose to reside in at the time of completion of training abroad.

Hypothesis 2 Strong communal dispositions lead to higher return propensity among ECRs. Parochial academics, attributing higher importance to place-based, social and familial considerations associated with the home country, will show higher rates of repatriation, compared to cosmopolitan academics, who are open to divergent cultural experiences, global exposure, diversity and contrast.

The dependent variable in this hypothesis is the location decision of the ECR. The independent variables are a collection of indicators regarding the role played by the chosen community in the ECR's decision of where to live at the time of completion of training overseas.

Hypothesis 3 A positive relation is expected between ECRs' migration and their academic mobility, to maximize their abilities prior to making their location choice. Cosmopolitan academics are prone to engaging in a geographically broader job search, thus increasing their chances to leave their home country. Parochial sentiments are expected to cast doubt on the rewards of such endeavor, thus reducing repatriates' academic mobility upon termination of studies.

The dependent variable in this hypothesis is the location decision of the ECR. The independent variables are a set of indicators designating the scope of efforts to find employment opportunities, in terms of the spatial (- global) layout, the importance assigned by the ECR to optimizing working conditions in their new location, as well as the conditions of the ECR's living environment once he or she settles into their new position.

Model specification

We tested our hypotheses by a two-step approach, common in studies on return migration (Coniglio & Prota, 2008; Crescenzi et al., 2017; Israel et al., 2019; Li et al., 1996). Accordingly, we defined models that estimate drivers of mobilities among ECRs. The step that investigates the first two research hypotheses defines a regression model that specifies the chances to return as a function of scholars' disposition towards parochiality, nationalistic and cultural sentiments, and economic and personal attributes. The first regression model is specified as follows:

$$Z_n = \alpha + \gamma Localism\&ideology_n + \delta Placedbased_n + \theta X_n + \varepsilon_n \quad (1)$$

Z_n is the odds of scholar n to choose to return migrate in the aftermath of postgraduate or postdoctoral training abroad. *Localism&ideology* is a vector of proxies for the importance attached by untenured ECRs to national ideology (i.e., Zionism²), cultural values and local amenities.³ *Placedbased* is a vector of proxies for communal effects that regard ECRs' social embeddedness in the community, thereby measuring the impact of relatives and friends on their return.⁴ *Localism&ideology* and *Placedbased* are both operationalized forms of parochialism (vs. cosmopolitanism). That is, a multifaceted worldview that includes sub-attitudes toward community and nation. X is a vector of controls for the scholar's economic abilities and other socio-demographic characteristics (gender, ethnicity, personal status, offspring, field of study, economic status and time spent abroad); γ, δ, θ are the parameters of interest; and ε is an error term.

The third hypothesis is evaluated by defining a regression model that specifies the chances of an ECR returning as a function of the following factors: degree of international mobility, self-professionalism and future employment, and the living environment that relates it.

$$Z_n = \tau + \vartheta Mobility_n + \pi Professionalism_n + \beta Residence_n + \theta X_n + \varepsilon_n \quad (2)$$

Z_n is defined as in Eq. 1, *Mobility* is a vector of proxies for scholars' global job seeking endeavors⁵; *Self-professionalism* is a vector of proxies for professional behavior⁶; *Residence* denotes the importance given to amenities and quality of life; X is a vector of controls for individual characteristics; β is the coefficient that regards *Residence*, and ϑ, π are the parameters of interest.

² While national sentiments go beyond Zionism, in Israeli public discourse nationalism is often equated with Zionism (see, for example, Smith, 1995).

³ The vector combines qualities of place that exist in the selected location in the ECR's opinion on the one hand, and perceived values that a place carries with it on the other. The aspect of "values" is illustrated by the emphasis placed on patriotic sentiments and the education of youngsters. The amenities and quality of life in a given location are indicators of the "qualities" component. These indicators refer to the considerations given by ECRs to areas which could be placed along the cosmopolitanism-parochialism continuum (see, for example, Gill, 2005; Efstratios et al., 2014; Sabharwal & Varma, 2016; Remennick, 2022).

⁴ The vector includes the importance given to a possible reunion with the scholar's (and spouse's) community of origin. These are indications of place-based embeddedness within communal-social networks. The embeddedness influences young scientists' locational choices (see for example Israel, Cohen & Czamanski, 2019).

⁵ Activity in the international scale, including applying to institutions and firms, obtaining worldwide job offers and negotiating with potential employers (see, for example, Gill 2005; Gaulé, 2014; Remennick, 2022).

⁶ Including individual significances driving location decisions, like adequate information concerning job opportunities in the non-selected country to promptly find a job with a salary that reflects professional skills and supplies optimal equipment essential for research. Professionalism could be discerned by observing these characteristics (see, for instance, Gaulé, 2014; Sabharwal & Varma, 2016; Israel et al., 2019).

The research population and data collection

To test the hypotheses, the study concentrated on Israeli ECRs in STEM disciplines.⁷ Israel, like other advanced countries, has profited from "brain gain," but it also faces the challenge of "brain drain" to other developed economies (Chan & Chan, 2021). Historically, Israel's policy has been to maintain cultural ties with migrants and then repatriate them, with a particular emphasis on highly skilled migrants (Cohen, 2013). As a "start-up nation," Israel is usually reported as a hub of worldwide scientific brain power, despite its small size. Israel's economic strength has traditionally been attributed to its investment in STEM fields (Senor & Singer, 2009). As a result, Israeli PhDs in most STEM fields exceed those in the humanities and social sciences (Cohen & Eyal, 2021). Tenure-track positions in Israeli academia are limited, which means that only a small number of PhD graduates can find jobs in one of the 62 universities or colleges.

Literature on academic mobility shows that some academics repatriate at the end of their stint abroad (Melin, 2005). In the context of Israeli nationals, studies found that cosmopolitan, national, ideological, and communal sentiments play a key role in their decision to both emigrate and repatriate (Cohen & Kranz, 2015; Lev-Ari, 2015). The return of Israelis was found to be motivated by patriotic attachment, suggesting that such tendencies are more prominent among those from lower socio-economic strata. The return decisions of more educated Israelis, however, tended to be motivated by employment opportunities (Toren, 1976). One would therefore expect academics to remain abroad for professional reasons. The present study tests this hypothesis by examining whether Israeli academics are indeed driven solely by professional motivations or do patriotic and ideological considerations play a role in their decision-making.

Despite Israel's efforts to globalize the (higher) education system and enhance students' cosmopolitan qualities, it remains parochial and national(istic) (Maxwell et al., 2020). Successive governments set up publicly funded programs aiming to repatriate highly skilled migrants, some of whom developed pluralistic, multi-cultural perceptions while abroad (Cohen, 2009). Many middle-class Israelis living abroad fostered strong sentiments to their 'home' nation (Yemini et al., 2019), while some Israeli ECR returnees developed cosmopolitan values without losing their local identity (Tubin & Lapidot, 2008).

However, less is known about non-returnees' sentiments and how they affect Israeli ECRs' location-choices. Israel et al. (2019) found that such choices are influenced by ECRs' social relations and economic wealth in their chosen location, which in Israel can be particularly daunting. Israeli academia is selective and elitist, to an extent that gender, class and ethnicity might play a role in the chances of prospective ECRs (Council for Higher Education, 2015).

Cosmopolitan and parochial sentiments could therefore play a crucial role in location choices of Israeli ECRs. To test this, we custom-designed a questionnaire that asked both returnees and non-returnees to retrospectively report on how they approached their migration decision-making upon completing their training overseas. Consequently, the questionnaire allowed for the identification of several location-selection factors and

⁷ Technological institutions that specialize in STEM often include disciplines like Architecture and Business. We therefore included these fields in our database.

other life circumstances throughout the decision-making in the period leading up to the completion of their training abroad. Specifically, subjects were asked about their disposition towards national ideology, local and universal cultural values, and the importance of place-based amenities. In the same vein, the questionnaire also asked about subjects' social embeddedness in the community (Israel or abroad); relatives and friends' influence on decision-making, the importance of community life, and the geographical breadth of their job search. Finally, we included questions about subjects' current positions (e.g., tenure-track faculty), professional behavior (e.g., endeavors for optimizing monetary and academic benefits of prospective positions) and socio-demographic characteristics (e.g., marital status, home ownership, and academic credentials during the specified period).⁸

Conducted in 2015–2016, the survey drew on a sample of Israeli ECRs in STEM disciplines who obtained faculty positions prior to being surveyed.⁹ We sampled two types of scholars: those who repatriated to Israel and those who stayed abroad, and they were mostly sampled following their graduation or termination of a postdoc internship(s). We identified 330 academic repatriates using three lists. The first list contained 180 scholars who joined the Technion—Israel Institute of Technology during the three years before the study was conducted. The Technion also offered a second list of some dozens of scholars who at the time applied for tenure track positions but were not accepted. We compiled a third list consisting of STEM faculty who recently returned to Israel (repatriates) and joined other institutions, through a close examination of the institutions' websites and cross-referencing with other sources.

To collect a sample of non-returnees, we conducted an extensive web search to identify Israeli scholars employed at academic institutions (research universities) in the US, Canada, and Europe,¹⁰ as well as a LinkedIn search to identify Israeli-sounding names of faculty members employed by universities in those countries. Based on this non-probability sample, we created a list of 113 Israeli researchers living abroad (non-returnees). It should be clarified that the list was made up of Israeli ECRs only. Although dozens of non-Israeli ECRs regularly attend the Technion and other Israeli universities, we decided not to include them in our survey for two main reasons. First, having spent their formative years and socialized outside Israel is likely to have had an impact on the development of their cultural orientations, including cosmopolitan/parochial outlooks, sense of patriotism, or more generally, national attachment. Secondly, scarce funding prevented us from translating our survey into languages other than Hebrew.

Drawing on their revealed behavior, two groups of sampled ECRs were defined—those who realized return to Israel when surveyed, and those who were living abroad. In total,

⁸ The assumption underlying the questionnaire's design was that the subjects stated their opinions as they were while choosing a place. It is likely that (non-)returnees will exhibit different and conflicting opinions before settling on a place. However, they weren't questioned about additional options, which may have led to a different conclusion due to the time which has elapsed since decision-making (but on the same considerations, constraints, etc. which led to their decision whether to leave or return). A future study that uses a Stated Behavior technique, rather than the Revealed Behavior strategy used in the current study, might investigate such probable intents or attitudes at the time of decision-making.

⁹ The study had been approved by the guidelines set forth by the ethics committee of the Samuel Neaman Institute for National Policy Research, at the Technion—Israel Institute of Technology (the ethics committee is made up of the institute's board members and headed by its Chair), and in line with those accepted in the social sciences. Since the study is non-interventional in its character, no ethical approval was required, and for that it was granted an exemption from the ethics committee.

¹⁰ The scholars' biographies were reviewed to ascertain whether they were in fact originally Israeli.

the database included 443 Israeli STEM ECRs (non/repatriated), identified by email addresses and sent a link to the questionnaire. Once the subjects completed the questionnaire, it was possible to determine, for example, whether they successfully obtained faculty positions. In total, 223 valid questionnaires were returned, with a response rate of 51%. The population of Israeli ECRs in STEM is reflected in the high response rate, since the sample comprised many of the country's candidates for academic posts in STEM at the time leading up to the survey.¹¹

Results

Sample characteristics

Table 1 presents socio-economic, demographic, and professional features of the subjects. Most of the interviewees (148, 66.4%) decided to return after completing their PhD or post-doctoral internship(s). 33.6% (75) of the ECRs surveyed decided to leave Israel. The majority of those who did not repatriate (66.6%) emigrated to the US, where they currently reside. Not surprisingly, the US was also the main destination for postdoctoral training among the respondents (59.6%). The internships (PhD or postdoctoral studies) lasted 3.23 years on average. In both groups, the proportion of ECRs who took longer than four years to complete their post-doctorate is relatively similar, with non-returnees having a higher percentage of ECRs without such internship.

As mentioned above, the sample consists mostly of STEM scholars (78.7%), mainly scientists (47% of sampled ECRs) but also engineers (35.4% of sampled ECRs). The non-STEM share (but related to STEM institutions. See footnote 6) of the sample is modest (approximately 17%). Most respondents, both returnees and non-returnees, demonstrate successful development in their career (Table 1). The results show that the vast majority (92%) of respondents were able to remain in academia and be employed as faculty members. This improves the comparability of returnees and non-returnees, because both groups seem to have managed to find employment as top-tier faculty members. Yet, a difference of about 10% was found between the groups, with 85.3% of non-returnees employed as faculty, compared to 95.3% among returnees. This may partially explain the relative wealth of returnees compared to those who chose not to return, with approximately 60% of the former reporting an above average financial state, while only 43% of the latter group reporting the same.

The sample shows that there is no variation in terms of gender and familial status while making decisions. Both returnees and non-returnees share the same characteristics; for example 80.3% of all sampled scholars were males (Table 1). The sample is consistent with what is already known about Israeli academia, where approximately 70% of all faculty members are males. The rate is higher in STEM disciplines, where only up to 15% are women (Council for Higher Education, 2015).

The compatibility of the sample with what is already known about Israeli academia, is further reflected in the interviewees' family status. Over 80% of all subjects were married

¹¹ Despite the constraints of the sampling technique used to generate the sample of non-returnees (which likely does not represent the whole study population. i.e., Israeli ECRs who did not return after studies), the ECRs we identified hold a variety of positions in Europe and North America's academies. Although the number of Israelis who got a PhD abroad and were subsequently recruited as Faculty in foreign countries is unknown, the response rate (75 out of 113, 66.4%) suggests that the sample of non-returnees is indicative of the population.

Table 1 Socio-economic, demographic, and professional profile of the sampled ECRs—returnees and non-returnees

	Returnees (n = 148)	Non-returnees (n = 75)	Total (n = 223)
Gender			
Male	79.7%	81.3%	80.3%
Female	20.3%	18.7%	19.7%
Total	100.0%	100.0%	100.0%
Personal\matrimonial status ^a			
Married	82.2%	82.7%	82.4%
Non-married	17.8%	17.3%	17.6%
Total	100.0%	100.0%	100.0%
Age groups			
24–40	65.5%	57.3%	62.8%
41+	34.5%	42.7%	37.2%
Total	100.0%	100.0%	100.0%
Offspring ^a			
Yes	81.8%	76.0%	79.8%
No	18.2%	24.0%	20.2%
Total	100.0%	100.0%	100.0%
Disciplinary affiliation			
STEM	83.7%	78.7%	82.0%
Non-STEM	14.9%	20.0%	16.7%
Unknown	1.4%	1.3%	1.3%
Total	100.0%	100.0%	100.0%
Contemporary (field of) occupation			
Faculty	95.3%	85.3%	91.9%
Academic (non-faculty)	2.7%	12.0%	8.5%
Industry/business sector	2.0%	2.7%	2.3%
Total	100.0%	100.0%	100.0%
Indicated economic status ^b			
Above the average	59.4%	42.6%	53.8%
Up to the average	40.6%	57.4%	46.2%
Total	100.0%	100.0%	100.0%
Duration of post- doctoral training abroad			
4+ years	39.9%	40.0%	40.0%
Up to 3 years	54.0%	40.0%	49.3%
No post-doc	6.1%	20.0%	10.7%
Total	100.0%	100.0%	100.0%

^a At time of decision making^b Respondents were asked on their economic status (at time of decision making) and provided their answer on an ordinal scale that runs through 4 categories: 1. 'Not good'; 2. 'Below average'; 3. 'At the average'; 4. 'Good and even very good'. Categories 1 through 3 were grouped to those who defined their economic status as 'Up to the average'. And category 4, was redefined as those that enjoy an economic status that is 'Above the average'

at the time of decision making, with a similar proportion having children. Many Israeli ECRs have families, as they are older than their counterparts in other countries¹² (Tubin & Lapidot, 2008).

¹² This is due to Israel's mandatory military service, which requires high school graduates to enlist in the IDF for two (women) or three (men) years.

Empirical findings

The first and second hypotheses, dealing with the effects of parochial (versus cosmopolitan) sentiments on return propensity, were initially tested by means of Mann–Whitney, a nonparametric test, and χ^2 (Tables 2, 3). The same initial analysis was used to test the third hypothesis, regarding the expected diminished commitment to international mobility. The independent variables in the analyses were measured both in ordinal and nominal scales. The results indicate a significant difference in the way parochial inclinations affect return propensities among the sampled scholars. “Appendix 1” provides supplementary data summarizing the main variables used in the analyses of the data and the construction of the statistical models.

Comparing the parochial and cosmopolitan inclinations of returnees and non-returnees

The findings related to Eqs. 1 and 2 will be given as the initial topic of discussion here (first and second research hypotheses respectively).

Analysis of the components in Eq. 1 of *Placedbased* (with respect to the second hypothesis), shows the family’s significance in ECRs’ location-choice. Repatriating scholars scored higher on average in variables related to the importance of living near family (Table 2). These results demonstrate the difference between repatriates and non-repatriates, in terms of the role their closest relationships play in their decision whether to return to their homeland, but also in choosing their place of work ($p < 0.001$, Z values of -7.1 and -5.5 respectively).

Here the question of cause and effect arises, as one may wonder whether this significance stems from the scholars’ appreciation of the family’s proximity or is it due to pressure from the family. The variable related to the importance scholars gave to parents’ wish for them to live nearby (see Table 2) provides a possible answer. A significant difference ($p < 0.001$) was shown between the two groups; repatriates are more influenced by their parents’ wishes (Z value of -5.5). Subjects’ personal family concerns (e.g., illness of family member or aging parents) were found to be negligible for both groups, although they had greater influence on repatriates. The spouse’s wish in determining the current place of living, was found to be significantly different ($p < 0.001$) between groups (Table 2).

Looking beyond family and community, at the *Localism&ideology* component in Eq. 1 (specifically, with regard to the first research hypothesis), it seems that nationalistic and cultural sentiments are significantly different between the two groups. For example, the variable representing the importance of national ideology (Zionism) in location-choice, further demonstrates the earnestness of returnees’ patriotic sentiments, compared to non-returnees (Table 2). The difference ($p < 0.001$) between the groups is even more evident by examining the scholars’ preferred living environment for raising their children. The variables regarding the importance of amenities and quality of life in the chosen location, or when choosing the current position (“Appendix 1”), indicate that non-returnees award a higher average score to the location’s quality (physical maintenance, amenities, climatic conditions, and services), than returnees (Table 2).¹³ This

¹³ While both variables treat the aspect that emphasizes the importance of amenities and quality of life, their perspectives are distinct. ‘*Localism and ideology*’ highlights the qualities of a possible place, like services, infrastructure, recreational activities, and so on, when choosing whether to repatriate or not. This stands in contrast to other characteristics of a given location, associated with community, family, and nationality, represented by the other variables within *Localism and ideology*. The term ‘*Residential environment*’ refers to the amenities and quality of life available in a person’s residence, chosen based on the job he or she accepted. “Appendix 1” highlights the subtleties of the variance between the two variables.

Table 2 Group differences between non-repatriating and repatriating scholars (Mann–Whitney tests)

Variable ^a	Group belonging	Mean rank ^b	Mann–Whitney U-test
<i>Professionalism and the optimization of the terms of office</i>			
Lack of adequate information concerning job opportunities in the non-selected country	Non-returnees	132.32	Z = − 3.789
	Returnees	101.70	Sig. = 0.000
The importance of promptly finding a job in determining location-choice	Non-returnees	126.05	Z = − 2.370
	Returnees	104.88	Sig. = 0.018
The importance that was given during the location-choice process, to finding a job with a salary that well reflects professional skills	Non-returnees	143.13	Z = − 5.276
	Returnees	96.22	Sig. = 0.000
The importance given to the best offer received in choosing a position	Non-returnees	127.25	Z = − 2.645
	Returnees	104.27	Sig. = 0.008
The importance of choosing a position with a salary that well reflects professional skills	Non-returnees	140.53	Z = − 4.863
	Returnees	97.54	Sig. = 0.000
<i>Localism and ideology</i>			
The importance of amenities and quality of life in the place of living in determining location-choice	Non-returnees	136.47	Z = − 4.149
	Returnees	99.60	Sig. = 0.000
The importance that was given by the scholar's wish to raise offspring as local, in determining the location-choice	Non-returnees	80.33	Z = − 5.351
	Returnees	128.05	Sig. = 0.000
The importance of being patriotic (Zionist) in determining location-choice	Non-returnees	78.47	Z = − 5.656
	Returnees	128.99	Sig. = 0.000
<i>Placed-based communal-social embeddedness</i>			
The importance of the spouse's wish to live in the current place of living in determining location-choice	Non-returnees	82.61	Z = − 4.977
	Returnees	126.89	Sig. = 0.000
The importance of parents' wishes to live nearby them, in determining location-choice	Non-returnees	77.97	Z = − 5.736
	Returnees	129.24	Sig. = 0.000
The importance of the scholar's wish to live near family in determining location-choice	Non-returnees	70.19	Z = − 7.125
	Returnees	133.19	Sig. = 0.000
The importance of the scholar's wish to live near friends in determining location-choice	Non-returnees	70.30	Z = − 7.048
	Returnees	133.13	Sig. = 0.000
The importance of the scholar's wish to live near family when choosing the current position	Non-returnees	79.39	Z = − 5.498
	Returnees	128.53	Sig. = 0.000
The importance of the scholar's wish to live near friends when choosing the current position	Non-returnees	78.31	Z = − 5.700
	Returnees	129.07	Sig. = 0.000
The importance of parents' wishes to live nearby them when choosing the current position	Non-returnees	81.59	Z = − 5.295
	Returnees	127.41	Sig. = 0.000
<i>Residential environment</i>			

Table 2 (continued)

Variable ^a	Group belonging	Mean rank ^b	Mann–Whitney U-test
The importance of the amenities and quality of life that characterize a place of living when choosing the current position	Non-returnees	148.81	$Z = -6.211$
	Returnees	93.34	Sig. = 0.000

^a The full description of the variables is given in "Appendix 1"

^b In order to calculate the Mean Rank in Mann–Whitney, the test replaces all scorers with their rank numbers. Higher scores get higher rank numbers. Mean Rank will be the arithmetic average of the positions in the list. Thus, the values of the Mean Rank reported in Table 2 are not matching the response scales describe in "Appendix 1"

difference means that non-returnees were more concerned about issues that are stripped from normativity vis-a-vis cultural-communal, parochial values, thus suggesting a higher disposition to cosmopolitanism. Whereas repatriates were more troubled by parochial considerations, as indicated by the importance they placed on the cultural environment for raising their offspring, non-returnees cared less about this factor (Z value of -5.4), thus supporting (by the results) the hypothesis regarding the effect of nationalistic and communal dispositions on return propensity (i.e., second hypothesis).

An examination of the findings with reference to the third research hypothesis, indicates that returnees' revealed behavior carries a bounded pattern of (international) mobility, in contrast to non-returnees, whose behavior reveals a much more mobile pattern. The groups diverge in terms of their efforts to search for international jobs. Analysis of the components *Mobility* and *Self-professionalism* in Eq. 2, included variables like maximization of economic and academic utility, negotiating exertions, and pursuing promising job opportunities.

While the majority of all sampled scholars pursued both international and Israeli job opportunities (Table 3), non-returnees were 'bolder' in their mobility plans. About 36% of non-returnees declared their main goal post-graduation to be an academic position overseas, compared to 4.7% among repatriates. Table 3 indicates the percentage of repatriates who abandoned that goal in favor of a return act (38.5% of returnees, compared to 5.3% among non-returnees).

The sampled ECRs' conduct might be understood in terms of subjective national labor market prospects, or the difficulty of finding work that fits the scholar's training. Scholars who see employment abroad as difficult to attain, may therefore express dissatisfaction with their overseas stay and a desire to return to their homeland. However, based on the study's findings, such a conclusion seems unlikely, since they show that all surveyed scholar placed a high importance on job searching both overseas and at home. This suggests that the ECRs' proclivities for parochialism or cosmopolitanism might indeed have played a significant role in their location decisions.

Integration in the job market and finding a position which best supports their objective was 5% more urgent for non-returnees than for returnees (Table 2). With such urgency in mind, it is necessary to diversify one's set of job opportunities (Jewell & Kazakis, 2020). Indeed, the majority (95%) of non-returnees declared that they applied to both Israeli and non-Israeli job offers, whereas only 59% of returnees made the same declaration (Table 3). Table 3 also indicates that 43.2% of returnees actively sought employment with overseas research institutions/companies (compared to 92% of non-returnees). This

Table 3 Group differences between non-repatriating and repatriating scholars regarding international mobility (Chi-Square tests)

Variable ^a	Categories (%)				
The scholar's plans	To repatriate	To work abroad	To repatriate or to work abroad	Unknown	Total
Non-returnees	5.3%	36.0%	58.7%	0.0%	100.0%
Returnees	38.5%	4.7%	54.1%	2.7%	100.0%
Total	27.4%	15.2%	55.6%	1.8%	100.0%
Statistical test	$\chi^2=54.2$, df=3 p≤0.000				
	No	Yes			Total
Obtaining job offers from Israeli scientific institutions\ business firms					
Non-returnees	74.7%	25.3%			100.0%
Returnees	39.2%	60.8%			100.0%
Total	51.19%	48.9%			100.0%
Statistical test	$\chi^2=25.1$, df=1 p≤0.000				
Applying to Israeli academic research institutions/business firms					
Non-returnees	54.7%	45.3%			100.0%
Returnees	8.8%	91.2%			100.0%
Total	24.2%	75.8%			100.0%
Statistical test	$\chi^2=57.1$, df=1 p≤0.000				
Negotiating with Israeli institutions\ business firms					
Non-returnees	85.3%	14.7%			100.0%
Returnees	36.5%	63.5%			100.0%
Total	52.9%	47.1%			100.0%
Statistical test	$\chi^2=47.7$, df=1 p≤0.000				
Obtaining job offers from foreign scientific institutions\business firms					
Non-returnees	10.7%	89.3%			100.0%
Returnees	44.6%	55.4%			100.0%
Total	33.2%	66.8%			100.0%
Statistical test	$\chi^2=28.8$, df=1 p≤0.000				
Applying to foreign academic research institutions/business firms					
Non-returnees	8.0%	92.0%			100.0%
Returnees	56.8%	43.2%			100.0%
Total	40.4%	59.6%			100.0%
Statistical test	$\chi^2=49.2$, df=1 p≤0.000				
Negotiating with foreign institutions\ business firms					
Non-returnees	24.0%	76.0%			100.0%
Returnees	80.4%	19.6%			100.0%
Total	61.4%	38.6%			100.0%
Statistical test	$\chi^2=66.8$, df=1 p≤0.000				

^a The full description of the variables is given in "Appendix 1"

data suggests that many repatriates saw themselves as capable of obtaining work overseas and did not feel disqualified in advance.

However, the study shows that non-returnees were more effective in their efforts than returnees. Non-returnees received a larger set of foreign job offers, compared to repatriates, 89.3% and 55.4% respectively (Table 3). Non-returnees were better able to turn job offers into contract negotiations, compared to returnees (Table 3). Only 20% of returnees engaged in such negotiations, which suggests difficulty in getting offers overseas, or

a parochial proclivity which led them to return despite the possibilities available elsewhere. The findings support this latter interpretation, which corresponds to the third research hypothesis.

The ongoing investigation of the third study hypothesis reveals a different result, derived from the variables indicating Israeli job offers and negotiations with Israeli institutions and companies. Around 60% of repatriating scholars declared they had made such endeavors, whilst only 25% of non-returnees benefited from such opportunities (Israeli job offers). A smaller share of non-returnees was able to convert those offers to active negotiations (Table 3). Table 2 shows how, unlike non-returnees, the maximization of employment terms (i.e., the importance given to the best offer received in choosing a position) was less crucial in repatriates' location-choice. The results align with past evidence showing that return among highly skilled returnees negatively correlates with optimizing labor conditions (Crescenzi et al., 2017). Concomitantly, the results (Table 2) also corroborate the larger importance non-returnees place on financial remuneration (i.e., a position with a salary that reflects professional skills), compared to repatriated ECRs ($p < 0.001$). The significant differences between the groups point to different patterns of behavior, thus supporting (by the study's evidence) the third research hypothesis. The results demonstrate how returnees commit themselves to limited employment options, thus further advancing their return, whereas non-returnees are more committed to a mobile pattern and employment options that realize professional abilities and maximize economic rewards. Employment opportunities overseas may be better for non-returning ECRs than at home. In the absence of information on employment possibilities in the non-selected country, it appears that this limitation was less relevant for returnees in their location-choice, compared to non-returnees (Table 2). Cosmopolitan sentiments may represent a reaction to such limitation, rather than a genuine desire to avoid returning to the homeland.

Results of binary logistic models

Tables 4 and 5 present two sets of binary logistic models that were estimated to test the relation between scholars' decision to repatriate and the explanatory variables. The dependent variable was dichotomous and indicates the decision to repatriate (1) or not (0). Controlling for the variables entered, the models allowed an examination of the net effect of scholars' parochial dispositions, as well as their commitment to international mobility, on the chances to repatriate.¹⁴

Models 1–3 in Table 4 relate to the specified first regression model, treating the components *Localism&ideology* and *Placedbased* (communal-social embeddedness). Starting with *Localism&ideology* (relating to the first study hypothesis), models 1–3 evaluated the variable of patriotic sentiments. The findings show how national ideology positively influences re-integration with the sending country. The variable representing the scholar's national feelings (Zionism) significantly associates ($p < 0.001$) in determining return. On the one hand, the desire to connect with the chosen community and raise a family within its culture, values and lifestyle significantly increases the chance of a return. On the other hand, as the variable representing amenities and quality of life indicates, the

¹⁴ Personal characteristics (e.g., gender, ethnicity, marital status, offspring) were not included in the analysis, because of their statistical non-significance vis-à-vis repatriation chances.

Table 4 Model estimation results 1 (LOGIT): dependent variable = ECR's repatriation

Model fit summary	Model 1		Model 2		Model 3	
Number of observations	223		223		223	
– 2 Log-likelihood	194.997		100.845		65.483	
Cox & Snell pseudo-R ²	0.331		0.504		0.567	
Nagelkerke pseudo-R ²	0.460		0.699		0.786	
Parameter ^a	Estimate	SE	Estimate	SE	Estimate	SE
<i>Localism and ideology</i>						
The importance of amenities and quality of life in the place of living	– 1.142	0.195***	– 1.542	0.312***	– 1.486	0.407***
The importance of being patriotic	0.591	0.148***	0.618	0.216**	0.707	0.292**
Raising my offspring as local	0.756	0.164***	0.335	0.219	0.072	0.301
<i>Placed-based communal-social embeddedness</i>						
Geo proximity of the parents			0.513	0.165**	0.572	0.233**
The importance of the spouse's wish to live in the current place of living			0.833	0.224***	0.862	0.317**
The importance of the scholar's wish to live near friends when choosing the current job position			0.691	0.236**	1.144	0.351***
The degree to which friends and parents assisted in decision making			0.919	0.276***	1.268	0.417**
<i>Economic and personal effects</i>						
Parental support					0.637	0.036**
Total number of years spent abroad					0.330	0.170*
Owning assets					– 0.512	0.856
Spouse experienced difficulties in finding a job, at the post-decision period					1.127	0.732
Constant	0.367	0.554	– 7.385	1.215***	– 8.649	2.283***

*Significant at the 0.10 level; **significant at the 0.05 level; ***significant at the 0.01 level

^a The full description of the variables is given in "Appendix 1"

greater the influence of non-communitarian and non-ideological concerns in the scholars' location decision, the higher the odds of them eventually migrating away from their homeland.

Along with the effects of *Localism&ideology*, the variables representing *Placedbased* (pertaining to the second research hypothesis) substantially influenced our findings (models 2–3). The scholars' relationship with their antecedent community (e.g., in the sending country) positively influences their odds to repatriate. Starting with their closest relationship—a repatriation act relates to the spouse's desires, as manifested in the variable representing the spouse's satisfaction with the current place of residence in determining location-choice. The weight of the partner's will in determining location-choice exhibits a positive relationship with return and re-integration in the couple's antecedent community in models (2–3). For example, in Model 2 (as well as in model 3, albeit at a lower level of significance), the variable representing the degree of involvement of friends and parents in decision making further indicates how scholars' antecedent communities positively impact the chances to return. The influence of ECRs' close social circles significantly differs between the two sampled groups, such that repatriating scholars are more likely to be influenced by their sending community's involvement in the decision where to live following their training. Moreover,

Table 5 Model estimation results 1 (LOGIT): dependent variable = ECR's repatriation

Model fit summery	Model 4		Model 5		Model 6		Model 7	
Number of observations	223		223		223		223	
– 2 Log-likelihood	146.235		135.406		121.101		98.460	
Cox & Snell pseudo-R ²	0.463		0.488		0.520		0.566	
Nagelkerke pseudo-R ²	0.642		0.677		0.721		0.785	
Parameter ^a	Estimate	SE	Estimate	SE	Estimate	SE	Estimate	SE
<i>Mobility</i>								
Obtaining job offers from foreign scientific institutions\business firms	– 1.722	0.559**	– 1.473	0.583**	– 1.774	0.688**	– 1.868	0.736**
Applying to foreign academic research institutions/business firms	– 2.536	0.612***	– 2.673	0.661***	– 2.490	0.687***	– 2.613	0.817***
Obtaining job offers from Israeli scientific institutions\ business firms	0.940	0.443**	0.816	0.462*	1.063	0.512**	1.452	0.590**
Applying to Israeli academic research institutions/business firms	2.224	0.565***	2.536	0.620***	2.356	0.655***	2.591	0.762***
Negotiating with Israeli institutions\ business firms	1.650	0.462***	1.297	0.493**	1.415	0.530**	0.812	0.596
<i>Self-professionalism</i>								
The best offer			– 0.453	0.204**	– 0.429	0.219**	– 0.308	0.237
Optimal equipping essential for research			0.238	0.173*	0.244	0.179	0.181	0.202
A salary reflecting professional skills			– 0.388	0.205*	– 0.186	0.226	– 0.363	0.254
<i>Residence</i>								
The importance of amenities and quality of life that characterize a place of living					– 0.723	0.206***	– 0.863	0.249***
<i>Economic and personal</i>								
Owning assets							1.739	0.593**
Parental support							0.702	0.267**
Constant	1.150	0.657*	3.365	1.107**	4.897	1.286***	3.356	1.499**

*Significant at the 0.10 level; **significant at the 0.05 level; ***significant at the 0.01 level

^a The full description of the variables is given in "Appendix 1"

in this context, introducing the *Placedbased* group of variables in models 2 and 3, reveals that the importance placed by ECRs on bringing up their offspring as a local becomes insignificant. This demonstrates how the effects of *Placedbased* expresses to some extent the meaning that is in this upbringing, emphasizing the significance of family and social relationships.

The role played by the chosen community in ECRs' (non-)return decision, is further operationalized in Model 3, which also controls for the ECRs' economic and personal status. The model indicates how the scholars' inclination to parochiality is influenced by parents' willingness to assist their offspring (i.e., regular support through funding, child rearing and education). There is a positive correlation (at a level of 5%) between return and parents' ongoing assistance. This is supported by previous studies showing

correlation between lesser needs, in terms of re-integration into social networks, and return (Baruch et al., 2007; Crescenzi et al., 2017). Parents' supportive acts alleviate economic hardships that could accompany the first stages of return, due to spousal difficulty, for example, caused by the degree of embeddedness in the host country—a key point in expatriates' satisfaction with life overseas (Tharenou & Caulfield, 2010)—affecting all family members. This is represented by the variable indicating the spouse's difficulties in finding a job during the post-decision period (Model 3). The spouse's difficulties positively (but not significantly) correlate to return¹⁵ and are possibly linked (in Model 2) to the length of stay abroad. As shown by the variable representing the number of years spent abroad, a longer period abroad significantly increases the probability of return (Model 3). This finding is surprising, as one would expect a longer period overseas to be associated with non-return (see for example Lev-Ari, 2008). However, this anomaly can be explained by the failure to form local networks abroad and integrate, which makes it difficult to find a job, encouraging scholars to return (Crescenzi et al., 2017). Longing and desire to return after a long period abroad can provide another explanation.¹⁶

All of the above, as well as the results of models 4–7 in Table 5, support the first and second hypotheses by demonstrating how repatriation is associated with parochial considerations. Indeed, models 4–7 relate to the second regression model, treating the components *Mobility*, *Self-professionalism*, and *Residence* (components pertaining to the third research hypothesis). The models' results indicate a negative association between repatriation and realization of rewards, associated with a person's investment in human capital. The variable representing application to foreign academic research institutions/companies indicates this by showing that international endeavors in seeking tenure track positions, or other positions, lower the chances of return. This finding, evidenced in models 4–7, correlates to the significant positive relationship between return and the scholar's application to Israeli institutions. While foreign job offers negatively correlate (5% significance) with return, Israeli offers significantly raise the chances for it (models 4–7). Table 5 corroborates these results by indicating a positive association (in models 4–6) between an active negotiation with Israeli institutions and companies and scholars' odds of repatriating.

Scholars who were more influenced by a location's amenities in their return decision, have a greater chance of staying abroad (at a 1% level in models 6–7). This finding is supported by the significant negative association between the decision to leave and the job offer perceived by the scholar to be most beneficial (significant at the 5% level in Model 6), and the salary that best reflected professional worth (with a level of significance $p < 0.10$ in Model 5). These results support the third hypothesis, emphasizing the differences between non-returnees and returnees by confirming that the first group's

¹⁵ However, when parental support and property-ownership are removed from the model, the spouse's difficulties variable becomes significant ($p < 0.10$). This shows that the existence of a social and economic safety net in the receiving community reduces ad hoc hurdles for the returning spouse. This finding validates, for example, Lev-Ari's (2015) conclusion that Israeli women who owned a property were better able to re-assimilate on their return and, in the context of the present study, demonstrates how financial and social security in the home community further enhance scholars' inclination to return.

¹⁶ Proclivities for parochiality may also pertain to Israeli spouses who accompany their ECR partner in their stint abroad. They may have difficulties adapting in the receiving community as companions, often without viable career opportunities, and hence be prone to parochialism and to return (Gold, 2002).

commitment to academic mobility while realizing their professional potential correlates to their chance of leaving their sending country. Compared to returnees, the importance of maximizing employment opportunities (and being less parochial) for non-returnees, is a strong driver of locational choice, and as expected—pushes them away from Israel. However, when personal economic circumstances (in Model 7) and location amenities (in Model 6) are taken into consideration in the decision to return, the importance of material conditions of the academic post on this decision, becomes insignificant.

Surprisingly, the variable representing optimal equipping in Model 5 reveals a significant positive relationship (at a 10% level) with repatriation, by indicating a correlation between scholars' endeavors to quickly secure lab equipment, thus maximizing their potential, and likelihood of returning.¹⁷ However, the effect disappears when introducing controls for *Residence* and *Economic and personal*.

Conclusions

The study investigated the nexus between worldly orientations and Israeli ECRs' return decisions. It found that as a group, returnees exhibited higher levels of parochial tendencies in comparison with non-returning co-nationals. Specifically, they attached higher importance to local attributes, including place-specific social networks, familial proximity, and communal support. In addition, they expressed higher levels of patriotism and support towards national culture and ideology (e.g., Zionism). Non-returnees, for their part, awarded higher significance to generic attributes like local amenities, favorable climatic conditions, and infrastructures. Geographically, their search for professional opportunities was significantly broader than that conducted by returnees.

In line with our hypotheses, these findings suggest that ECRs with cosmopolitan outlooks are likelier to choose international migration as their course of action. Seeking to maximize their scientific utilities, non-returnees make significantly greater efforts to pursue the best possible employment opportunities that match their skills, *regardless* of their location. In contrast, ECRs who subscribed to more parochial worldviews were much more likely to return to Israel at the end of their overseas training. In so doing, they typically gave up on a geographically broad job search, limiting their options to those available in their country of origin.

In contrast to much of literature, which conceives of academics as cosmopolitan, open-minded subjects who hold liberal worldviews and may roam the borderless world in the name of scientific excellence, our findings reveal a more nuanced picture. Indeed, it shows that alongside academics who hold cosmopolitan views, there exists a group of parochial academics for whom national culture, ideological sentiments and proximity to the familiar are no less, and perhaps more, important than landing the best position out there. However, a parochial academic does not necessarily give up on his or her ambition for scientific excellence. Indeed, as our research shows, Israeli ECRs who opted to repatriate were adamant to attain the best possibly

¹⁷ The effect is explained by Israel's scientific field. The country's limited scientific infrastructure increases competition between academic institutions for talented ECRs, predominantly Hebrew speaking Israelis or Jews (who are also coveted by foreign institutions in some cases). This rivalry is manifested, among other ways, by granting returning ECRs well-equipped labs, start-up research fundings and other material incentives (Kirsch, 2018; 2016). These could encourage return, since a similar process abroad may take longer.

working conditions in Israel, including well-equipped labs or access to prestigious research grants. Thus, even parochial academics harbor cosmopolitan tendencies and do their best—within their own limited geographical boundaries—to play the global scientific playing field. Rather than binary, discrete categories that represent culturally distinct poles, parochialism and cosmopolitanism are better thought of as fluid categories with open boundaries, lying on a continuum, which individuals' location along it changes spatially and temporally.

The idiosyncrasies of the Israeli case notwithstanding, our findings could be useful for studies conducted in other geographical and cultural contexts. To transcend some of the limitations of our study, we suggest that future studies attempt to diversify the range of structural (e.g., geopolitical) and agentic determinants that underpin trajectories of academic mobility. More careful attention should be paid to ECRs' demographic characteristics, including age, ethnicity, or race, and their role in increasing—or decreasing—return. Gender is a particularly interesting lens through which to examine these questions. This is not merely due to the severe under-representation of females in STEM disciplines, and the unique obstacles they face in securing academic positions, especially in the early years of their training, as they struggle to balance work and private life. It is also due to the distinctly different socialization processes of boys and girls, which could potentially have a substantial effect on the development of their cultural orientations. In Israel, famous—or notorious—for the construction of its patriotic manhood, such differences could play an especially central role in shaping gender differences, with respect to the parochialism-cosmopolitanism continuum. Gender should therefore be incorporated more seriously into future studies, in order to explore its impact on—and correlation with—cosmopolitan orientations among young(er) female ECRs and their academic mobilities. While this could be well accomplished by quantitative means (e.g., by including gender as a discrete indicator in models), qualitative methods may be better suited here. Personal interviews, for example, in which male and female ECRs are asked to subjectively articulate the meaning of cosmopolitanism and explain whether and how it might have influenced their decision to remain abroad or repatriate, could reveal a great deal about gender-sensitive cultural orientations and their correlation with return decisions among young academics.

Finally, to avoid the limitations of the revealed behavior approach used here, future studies should apply different methods of analysis (Israel & Cohen-Blankshtain, 2010). Rather than inspecting the real preferences of academics, a stated behavior approach can be applied, in order to overcome rational bounded decisions. The current analysis assumes that people who live abroad permanently departed Israel. It is reasonable to presume that individuals currently overseas intend to return at some point, or that those who have no intention of returning may ultimately do so. Similar assumptions might be formed about individuals who have returned. Under a stated behavior approach, the inspection will focus on the planned return of non-returnees (who may become future returnees), as well as the future mobility of returnees. Additional discussions and explorations, which look beyond the STEM fields for example, would contribute to our initial study and expound further on the role played by cosmopolitan and parochial perspectives in return decisions of the highly skilled.

Appendix 1: Variables, measurement scales, descriptive statistics and explanations

Variable code	The variable's meaning	Mean	S.E	Scale of measurement
<i>Solely professional and (a-)communal considerations in scholars' location choice and their job-seeking endeavors</i>				
SALRFX	The importance I gave during the location-choice process to finding a job with a salary that well reflects my professional skills	3.1	0.1	Likert ordinal scale: 1. 'Not important at all' to 5. 'Very much Important'
BST_OFR	The importance I gave in choosing my job to the best offer received	3.9	0.1	The same as the above variable
FNDASP	The importance of promptly finding a job, in determining the location-choice	2.9	0.1	The same as the above variable
SAL_PRF	The importance I gave in choosing my job to a salary that well reflects my professional skills	3.2	0.1	The same as the above variable
QUL_LFIN	The importance I gave in choosing my job to the amenities and quality of life that characterize my place of living	2.9	0.1	The same as the above variable
EQUIP	The importance I gave in choosing my job to its benefits regarding assisting in gaining an optimal equipping that is essential for my research	3.1	0.1	The same as the above variable
PD_DO	The scholar's plans post-graduation or after terminating the postdoc's internship	2.3	0.1	Nominal scale of: 1. 'To return to Israel and abandon an option of working abroad'; 2. 'To solely seek an academic\ professional position abroad'; 3. 'To seek employment opportunities in both Israel and abroad'; 4. 'Returning to a previous job'
INIT_INSTABD	Applying to foreign academic research institutions/business firms at studies' graduation/ending the internship of the postdoc	0.6	0.0	Dichotomic nominal scale of: 0. 'No'; 1. 'Yes'
INIT_INSTISR	Applying to Israeli academic research institutions/business firms at studies' graduation/ending the internship of the postdoc	0.1	0.0	The same as the above variable
INSTIT_ABR	Obtaining job offers from foreign scientific institutions\business firms, at studies' graduation/ending the internship of the postdoc	0.7	0.0	The same as the above variable
<i>Solely professional and (a-)communal considerations in scholars' location choice and their job-seeking endeavors</i>				
INSTIT_ISR	Obtaining job offers from Israeli scientific institutions\ business firms, at studies' graduation/ending the internship of the postdoc	0.5	0.0	The same as the above variable
NEGO_ISR	Negotiating with Israeli institutions\ firms at studies' graduation/ending the internship of the postdoc, and prior to starting my current job	0.5	0.0	The same as the above variable
NEGO_ABD	Negotiating with foreign institutions\ firms at studies' graduation/ending the internship of the postdoc, and prior to starting my current job	0.4	0.0	The same as the above variable
LKINFO	The importance of inadequate information about tenure track opportunities in the non-selected country, in determining if to terminally leaving Israel or to repatriate to it	1.8	0.1	Likert ordinal scale: 1. 'Not important at all' to 5. 'Very much Important'

Variable code	The variable's meaning	Mean	S.E	Scale of measurement
<i>Being cosmopolitan\parochial in a scholar's location choice and in job-seeking endeavors</i>				
NEAR_FAM	The importance given to my wish to live near my family at time of decision whether to leave Israel indefinitely or to repatriate to it	3.6	0.1	Likert ordinal scale: 1. 'Not important at all' to 5. 'Very much Important'
PRTS_PRX	Degree of geographic proximity to the scholar's parents (or the parents of his or her spouse)	2.3	0.1	Ordinal scale of: 1. 'No closeness'; 2. 'Partial closeness (one of the parents' couples live in the region)'; 3. 'Fully partial closeness (two pairs of parents live in the region)'; 4. 'Close proximity (one of the parents' couples live in the locality of the scholar and his or her spouse)'; 5. 'Full proximity (all the parents from all sides live in the locality of the scholar and his or her spouse)'
ASST_PRS	The degree that parents (and his or her spouse's parents) routinely assist their offspring (e.g. in funding, child rearing and education)	2.6	0.1	Ordinal scale of: 1. 'Do not assist' to 5. 'They are assisting to a very great extent'
NEAR_FRD	The importance given to my wish to live near my friends at the time of decision whether to terminally leave Israel or to repatriate to it	3.3	0.1	Likert ordinal scale: 1. 'Not important at all' to 5. 'Very much Important'.
QUA_LOC	The importance I gave to the amenities and quality of life that characterize my place of living at time of decision whether to terminally leave Israel or to repatriate to it	3.1	0.1	The same as the above variable
<i>Being cosmopolitan\parochial in a scholar's location choice and in job-seeking endeavors</i>				
REAR_CHLD	The importance of my wish to raise my offspring as local in determining the location-choice in the chosen country	3.3	0.1	The same as the above variable
NEAR_FAM2	The importance I gave to my wish to live near my family in choosing my job	2.9	0.1	The same as the above variable
NEAR_FRD2	The importance I gave to my wish to live near my friends in choosing my job	2.6	0.1	The same as the above variable
PATRT	The importance of being patriotic (Zionist) in determining my location-choice	3.0	0.1	The same as the above variable
SPOS_NRB	The importance given to my spouse's wish to live in the current place of living in determining the location-choice	3.4	0.1	The same as the above variable
PRT_NRB	The importance given to my parents' wish to live nearby them in determining the location-choice	2.9	0.1	The same as the above variable
PRT_NRB2	The importance I gave to the parents' wish to live nearby them in choosing my job	2.1	0.1	The same as the above variable
ADVC_PRFRD	The degree to which parents and friends were involved in deciding whether to terminally leave Israel or to repatriate to it	2.2	0.9	Ordinal scale of: 1. 'Did not been involved' to 5. 'They were involved to a very great extent'
<i>Control variables at the personal and economic level</i>				
CHLD_NO	The number of children at the eve of deciding on the location-choice	1.8	0.1	Continuous number
PD_YRS	Total number of years the researchers spent abroad for their studies and internships	3.2	0.1	The same as the above variable

Variable code	The variable's meaning	Mean	S.E	Scale of measurement
ASST_PRS	The degree that parents (and his or her spouse's parents) routinely assist their offspring (e.g. in funding, child rearing and education)	2.6	0.1	Ordinal scale of: 1.'Do not assist' to 5. 'They are assisting to a very great extent'
<i>Control variables at the personal and economic level</i>				
DIFCT_SPS	Spouse experienced difficulties in finding a job, right after deciding on the household's location-choice	0.4	0.0	Dichotomic nominal scale of: 0. 'No'. 1. 'Yes'
OWN_HOUS	An owner of a residential asset, at time of decision whether to terminally leave Israel or to repatriate to it	0.5	0.0	The same as the above variable

Appendix 2: Bivariate correlation matrix between explanatory variables for model 1–3

	A	B	C	D	E	F	G	H	I	J	K
A	1.000	0.147*	0.278**	0.107	0.163*	0.092	−0.019	−0.042	−0.106	0.018	−0.011
B	0.147*	1.000	0.532**	0.173**	0.303**	0.215**	0.293**	0.310**	−0.018	0.336**	0.002
C	0.278**	0.532**	1.000	0.273**	0.364**	0.363**	0.250**	0.370**	0.018	0.258**	0.020
D	0.107	0.173**	0.273**	1.000	0.187**	0.326**	0.132	0.282**	0.023	0.106	0.062
E	0.163*	0.303**	0.364**	0.187**	1.000	0.163*	0.103	0.317**	0.070	0.335**	−0.142*
F	0.092	0.215**	0.363**	0.326**	0.163*	1.000	0.225**	0.168*	−0.064	0.186**	−0.037
G	−0.019	0.293**	0.250**	0.132	0.103	0.225**	1.000	0.299**	0.033	0.230**	−0.035
H	−0.042	0.310**	0.370**	0.282**	0.317**	0.168*	0.299**	1.000	0.036	0.375**	0.056
I	−0.106	−0.018	0.018	0.023	0.070	−0.064	0.033	0.036	1.000	0.050	0.033
J	0.018	0.336**	0.258**	0.106	0.335**	0.186**	0.230**	0.375**	0.050	1.000	0.060
K	−0.011	0.002	0.020	0.062	−0.142*	−0.037	−0.035	0.056	0.033	0.060	1.000

*Significant at the 0.10 level; **significant at the 0.05 level; ***significant at the 0.01 level. A—QUA_LOC 1: The importance I gave to the amenities and quality of life that characterize my place of living at time of decision whether to terminally leave Israel or to repatriate to it. B—PATRT 2: The importance of being patriotic (Zionist) in determining my location-choice. C—REAR_CHLD 3: The importance of my wish to raise my offspring as local in determining the location-choice in the chosen country. D—PRTS_PRX 4: Degree of geographic proximity to the scholar's parents (or the parents of his or her spouse). E—SPOS_NRB 5: The importance given to my spouse's wish to live in the current place of living in determining the location-choice. F—NEAR_FRD2 6: The importance I gave to my wish to live near my friends in choosing my job. G—ADVC_PRFRD 7: The degree to which parents and friends were involved in deciding whether to terminally leave Israel or to repatriate to it. H—ASST_PRS 8: The degree that parents (and his or her spouse's parents) routinely assist their offspring (e.g. in funding, child rearing and education). I—PD_YRS 9: Total number of years the researchers spent abroad for their studies and internships. J—OWN_HOUS 10: An owner of a residential asset, at time of decision whether to terminally leave Israel or to repatriate to it. K—DIFCT_SPS 11: Spouse experienced difficulties in finding a job, right after deciding on the household's location-choice

Appendix 3: Bivariate correlation matrix between explanatory variables for model 4–7

	A	B	C	D	E	F	G	H	I	J
A	1.000	0.352**	0.041	−0.132*	−0.098	0.030	0.023	0.221**	0.223**	−0.125
B	0.352**	1.000	−0.274**	−0.166*	−0.195**	0.099	−0.012	0.202**	0.244**	−0.175**
C	0.041	−0.274**	1.000	0.260**	0.246**	−0.156*	0.060	−0.133*	−0.082	0.048

	A	B	C	D	E	F	G	H	I	J
D	−0.132*	−0.166*	0.260**	1.000	0.449**	0.047	0.006	−0.202**	−0.219**	−0.010
E	−0.098	−0.195**	0.246**	0.449**	1.000	−0.017	0.195**	−0.245**	−0.116	0.073
F	0.030	0.099	−0.156*	0.047	−0.017	1.000	0.254**	0.190**	0.038	−0.195**
G	0.023	−0.012	0.060	0.006	0.195**	0.254**	1.000	0.254**	0.098	0.113
H	0.221**	0.202**	−0.133*	−0.202**	−0.245**	0.190**	0.254**	1.000	0.323**	0.045
I	0.223**	0.244**	−0.082	−0.219**	−0.116	0.038	0.098	0.323**	1.000	0.001
J	−0.125	−0.175**	0.048	−0.010	0.073	−0.195**	0.113	0.45	0.001	1.000

*Significant at the 0.10 level; **significant at the 0.05 level; ***significant at the 0.01 level. A—INSTIT_ABR 1: Obtaining job offers from foreign scientific institutions/business firms, at studies' graduation/ending the internship of the postdoc. B—INIT_INSTABD 2: Applying to foreign academic research institutions/business firms at studies' graduation/ending the internship of the postdoc. C—INSTIT_ISR 3: Obtaining job offers from Israeli scientific institutions/business firms, at studies' graduation/ending the internship of the postdoc. D: INIT_INSTISR 4: Applying to Israeli academic research institutions/business firms at studies' graduation/ending the internship of the postdoc. E—NEGO_ISR 5: Negotiating with Israeli institutions/firms at studies' graduation/ending the internship of the postdoc, and prior to starting my current job. F—BST_OFR 6: The importance I gave in choosing my job to the best offer received. G—EQUIP 7: The importance I gave in choosing my job to its benefits regarding assisting in gaining an optimal equipping that is essential for my research. H—SALRFX 8: The importance I gave during the location-choice process to finding a job with a salary that well reflects my professional skills. I—QUL_LFINS 9: The importance I gave in choosing my job to the amenities and quality of life that characterize my place of living. J—CHLD_NO 10: The number of children at the eve of deciding on the location-choice

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Author contributions

Conceptualization: EI, NC. Data curation: EI. Formal analysis: EI, NC. Investigation: EI, NC. Methodology: EI, NC. Project administration: EI, NC. Writing: EI, NC. All authors read and approved the final manuscript.

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Availability of data and materials

The dataset generated and analyzed during the current study is not publicly available to maintain the confidentiality of the sampled informants. It will be available from the corresponding author on reasonable request. we approve the new text.

Declarations

Competing interests

The authors declare no competing interests.

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