

## Assessing the New Home Economics with 2020 vision

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**ABSTRACT**

In the early 1960s Gary Becker and Jacob Mincer placed households and what they produce at the center of economic analyses dealing with consumption, labor markets, household decisions regarding health, children (fertility and children's human capital), and marriage. This school of thought was labeled the New Home Economics (NHE). Written sixty years later, in 2020, this article provides a rough assessment of the NHE. It is widely agreed that Becker and Mincer were the NHE's driving forces, and that it started with their first publications about it. However, there is limited consensus regarding who else belongs to the NHE and the year it ended. Our first contribution is to define the NHE in a way that helps determine which other researchers can be considered as being part of the NHE. Second, we offer an assessment of the NHE's success based on five criteria: awards to its participants, integration of ideas into mainstream applications of economics, NBER's inclusion of new applications of economic investigation spearheaded by the NHE, growth of new organizations promoting NHE-related research, and the academic

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<sup>1</sup> Parts of this paper are based on Beller and Grossbard (2019).

<sup>2</sup> This statement of purpose has been published by SABE at least since 1998. SABE newsletter (the) 2019, [https://sabeconomics.org/wordpress/wp-content/uploads/SABE\\_newsletter-Fall-2019-Attanasi.pdf](https://sabeconomics.org/wordpress/wp-content/uploads/SABE_newsletter-Fall-2019-Attanasi.pdf).

<sup>3</sup> We thank the following who provided helpful information and/or comments: Cynthia Bansak, Barry Chiswick, Daniela Del Boca, Linda Edwards, Victor Fuchs, Anna Gandolfi, Claudia Goldin, Michael Grossman, James Heckman, Shlomo Maital, Carolyn Mincer, Solomon Polachek, James Poterba, Valerie Ramey, Mark Rosenzweig and James Smith.

success of early students of Becker and Mincer who specialized in NHE from the time they were writing their dissertation.

## 1. Introduction

At least since the early 1900s and until recently economics has made little room for non-monetized applications. This has translated into more of a focus on one side of the circular flow of economic activity: businesses. If household economics is defined as all economic analyses of household decisions<sup>4</sup>, mainstream economics has mostly covered a relatively small part of household economics: the part with ties to the monetized economy. Micro- and macroeconomics have dealt extensively with how households consume and save, and labor economists have analyzed labor supply. The study of non-monetized outcomes--such as household formation and household production—was left to other disciplines. Early in the twentieth century a number of other fields of study found room to grow as economics restricted its scope of inquiry, including: (a) home economics, in which the study of household production was subsumed<sup>5</sup>, and (b) sociology, social psychology, demography and social anthropology which took over research on household formation and dissolution.<sup>6</sup>

The 1960s saw the birth of a new school of economic thought that brought research on non-monetized household decisions back into mainstream economics. Led by Gary Becker and Jacob Mincer it produced research related to household production and non-monetized household decisions, using then-prevalent or new analytical tools of micro-economics and econometrics. This school has been called the New Home Economics (NHE), as suggested by Marc Nerlove (see Nerlove 1974). It is widely agreed that the NHE started in the early 1960s, with the publication of Becker (1960) on fertility and Mincer's presentation of his innovative work on married women's labor supply at an NBER conference,<sup>7</sup> but there is no consensus regarding the end of the NHE.<sup>8</sup> We hereby define as NHE-ers those who (1) worked with Becker or Mincer on NHE-related research topics as colleagues or (2) were students of Becker or Mincer between 1960 and 1980 and either wrote a doctoral dissertation on a NHE theme or--if their dissertation did not deal with the NHE-- published articles related to the NHE within 15 years of graduation. The students were enrolled either at Columbia, where both Becker and Mincer taught in the 1960s and Mincer in the 1970s, or at the University of Chicago where Becker officially

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<sup>4</sup> In line with the aims and scope of the *Review of Household Economics*, as stated in <https://www.springer.com/journal/11150/aims-and-scope>.

<sup>5</sup> Margaret Reid (1934) published a book on household production, based on the dissertation she wrote at the University of Chicago. Hazel Kyrk had been her thesis adviser. On the origins of home economics see Folbre (1998), Beller and Kiss (2001), and Beller (2014). By the late 1970s, many departments of home economics had been reorganized and renamed as, for example, the College of Family and Consumer Sciences (Georgia), the School of Human Resources and Family Studies (Illinois), or the Department of Consumer Economics and Housing (Cornell). In the mid-1990s, some had been further transformed and merged with other departments, with the economics units becoming the Department of Agricultural and Consumer Economics (Illinois), or Policy Analysis and Management (Cornell).

<sup>6</sup> More on the history of economics and sociology of the family can be found in Grossbard-Shechtman (2001b).

<sup>7</sup> That paper was published as Mincer (1962). Mincer reported this 1960 presentation as the starting point of the NHE in at least two conversations Shoshana had with him, one on the phone and one in person.

<sup>8</sup> In a phone conversation in the 1990s Mincer told Shoshana that the term "New Home Economics" was not applicable any longer: 'new' loses its meaning after a certain amount of time.

moved in 1970.<sup>9</sup> The colleagues were either at one of these two economics departments or at the National Bureau of Economic Research (NBER), where both Becker and Mincer were senior researchers during most of that period. Now that sixty years have passed since the NHE's birth it is a good time to assess some of its accomplishments.

In Section 2 we list what we consider as the five principal topics to which the NHE contributed, mentioning some publications by NHE-ers: consumption, labor, health, children and marriage/divorce. Section 3 lists observations about the NHE's success. These observations are far from a systematic survey or assessment. The first observation deals with major awards obtained by Becker, Mincer and other prominent NHE-ers. The second observation assesses the NHE's success in terms of contributions to the study of consumption and labor markets, two outcomes that have been of major interest to economics at least since the early 20<sup>th</sup> Century. Given the centrality of these topics, it follows that NHE ideas have had a considerable impact not only on labor economics but also on fields as diverse as macro-economics, agricultural economics and development economics. The third observation assesses the success of three new applications of economic investigation spearheaded by the NHE in terms of resources devoted to these applications by the NBER.<sup>10</sup> These applications are health economics, economics of children, and economics of marriage and cohabitation. The fourth observation assesses the last two of these fields of specialization's success at attracting resources from organizations other than the NBER. The fifth and final observation reports on some of the personal academic successes of students of Becker and Mincer who wrote dissertations on NHE topics. Conclusions are found in Section 4.

## **2. The main contributions of the NHE**

Some of the information reported in this section draws on Grossbard (2001) and Beller and Grossbard (2019). The NHE's most important contributions all deal with non-monetized aspects of household decision-making, including decisions regarding household production. The following six categories focus on different principal outcomes of household decision-making. The cited NHE-ers were associated with Becker or Mincer at some point before 1980 (when NHE outcomes were central to the research agendas of Becker and Mincer) and published research on at least one of these outcomes within fifteen years of their association with Becker or Mincer. Many of the students' publications were based on their Ph.D. dissertation.

### **1/ Consumption**

The NHE introduced the time cost of consumption into what was standard economic analysis prior to the 1970s.<sup>11</sup> This contribution was spearheaded by analyses of consumption's cost of time by Mincer (1963) and Becker (1965). A fellow faculty member at Columbia, Kelvin Lancaster, published a theory of consumption based on the characteristics approach which was compatible with that of Becker and Mincer (Lancaster 1966). Students of Becker or Mincer at

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<sup>9</sup> For more information on students of Becker and Mincer at Columbia see Grossbard-Shechtman (2001a) and Beller and Grossbard (2019).

<sup>10</sup> The NBER (National Bureau of Economic Research) is a prestigious organization central to the economics profession (see <https://www.nber.org/about-nber>).

<sup>11</sup> The economic analysis of consumption included the PhD dissertation of Hazel Kyrk from the Economics Department at the University of Chicago in 1920, which added a social psychological perspective to the economics. The dissertation won the coveted Hart, Schaffner and Marx award and was published as a book in 1923 under the title *A Theory of Consumption* (Beller and Kiss, 2001). The book was reprinted by Arno Press in 1976.

Columbia who contributed articles on this topic include John M. Owen (e.g. 1964, 1969a, 1971), Gilbert R. Ghez (e.g. Ghez 1970, Ghez and Becker 1974), Robert T. Michael (e.g. Michael 1972, Michael 1973, Michael and Becker 1973), Haim Ofek (e.g. Ofek 1971, Hochman and Ofek 1977), and Anna Sachko Gandolfi (see Sachko Gandolfi 1975, Gandolfi 1986).<sup>12</sup>

## 2/ Labor Supply of Married Women and Gender Wage Differentials

The NHE offered new perspectives on labor economics, with a focus on the labor supply of married women and gender differentials in earnings. Becker (1965) and Mincer (1962, 1963) examined how households chose between allocating time to household production and working for commercial firms or government. Important work on this topic was contributed by James Heckman in his innovative econometric studies on the labor supply of married women introducing the “Heckit” methodology (e.g. Heckman 1974, Heckman and Ashenfelter 1974). Here Heckman is included among the NHE-ers, for he was a colleague first of Mincer at Columbia University and then of Becker at the University of Chicago. Becker, Mincer and Heckman also all worked as research fellows at the NBER in the early seventies. Furthermore, Heckman regularly attended the labor workshop then run by Mincer in the early 1970s and then Becker’s applications workshop at the University of Chicago.

Other NHE work on labor supply of women and wages was published by James P. Smith, Becker’s first student at Chicago (e.g. Smith 1977, 1979), and by Randy J. Olsen (Olsen 1977), a participant in Becker’s workshop at Chicago. Another Chicago Ph.D whose principal adviser was Becker, Michele Riboud, wrote a thesis on gender differences in earnings that is related to the NHE (Riboud 1977). In his 1978 thesis Thomas MaCurdy wrote two essays about the life cycle. One of these essays is related to his 1980 article with his principal thesis advisor, James Heckman: “A Life Cycle Model of Female Labour Supply” appeared in the *Review of Economic Studies* (Heckman and MaCurdy 1980). At least two Chicago students who did not write NHE dissertations wrote articles related to labor supply and household production: Claudia Goldin published on women’s labor supply and household production (e.g. Goldin 1977, 1979),<sup>13</sup> and Christopher Robinson who published e.g. Robinson and Tomes (1982) and Carliner, Robinson and Tomes (1984).

The following students of Becker or Mincer at Columbia wrote about labor markets and wages, writing theses connected to the NHE: Solomon Polachek (e.g. Mincer and Polachek 1974, Polachek 1975), Marjorie Honig (e.g. Honig and Hanoch 1980), and Nancy Garvey who wrote a dissertation on labor supply and earnings of young women (published in 1980). Work on women’s labor force participation was also published by June O’Neill, a student of Becker and Mincer at Columbia who wrote a thesis on a non-NHE topic (e.g. O’Neill 1981).<sup>14</sup>

The work of Mincer and Ofek (1978) on family migration is also related to labor market analysis. Becker (1965), Mincer (1963) and their students Reuben Gronau (1967) and John D. Owen (1969b) also examined the economics of commuting time and tied home production to the

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<sup>12</sup> Sachko Gandolfi showed that contributions to household production influence the purchase of life insurance by men and women.

<sup>13</sup> However, her doctoral thesis, completed in 1972, dealt with the economics of slavery and her principal adviser was Robert Fogel.

<sup>14</sup> O’Neill completed her dissertation at Columbia in 1970. It dealt with income and education effects on regional migration, not a NHE topic according to the definition used here.

study of transportation. Subsequently, Gronau wrote influential articles on the labor supply of married women, an application of NHE ideas to labor economics (Gronau 1973, 1977).

### 3/ Health Production at Home

The NHE spearheaded analyses of health production at home. At NBER's New York office, Becker and Mincer were colleagues of Victor Fuchs who is also a major innovator in health economics (e.g. Fuchs 1975) and is part of the NHE as defined here. A major innovator in this area was Michael Grossman, a student of Becker and Mincer at Columbia (see e.g. Grossman 1972, Anderson and Grossman 2009). Other students of Becker and Mincer at Columbia have contributed to health economics in the 1970s and early 1980s, namely Barry Chiswick wrote about the choice between health care provided at home or in hospitals (e.g. Chiswick 1976a, 1976b) and Linda N. Edwards on the health of children and adolescents (e.g. Edwards and Grossman, Shakotko et al. 1981). Mincer student in the 1970s, Ann P. Bartel, authored a few articles in health economics after she completed a dissertation on a topic not related to the NHE (Bartel and Taubman 1979, 1986). Chicago graduates Jacques Silber and Richard Steckel have written in the area of health economics after they had graduated: Silber published e.g. Berrebi and Silber (1981) and Silber (1982), while Steckel published e.g. Margo and Steckel (1983), and Steckel (1986, 1988).<sup>15</sup>

### 4/ Economics of Fertility.

The NHE developed the economics of children-related outcomes, with an emphasis on fertility and parenting (discussed below). Fertility is a topic covered in Becker (1960, 1965) and Mincer (1963). An early article by James Heckman on this topic is Heckman (1973). Students of Becker, Mincer or other faculty associated with the NHE have written on fertility both at Columbia and at Chicago. At Columbia, the following students produced dissertations related to fertility: Morris Silver who wrote a dissertation on birth rates and business cycles (Silver 1964) and was among the early participants of the Becker and Mincer labor workshop (e.g. see Silver 1964, 1965, 1966); Cynthia B. Lloyd's dissertation on child subsidies (Lloyd 1972)<sup>16</sup>; and Sue Goetz Ross (1974) who wrote a dissertation on the timing and spacing of births. A student of Mincer and Heckman at Columbia in the 1970s, Mark Rosenzweig (1973) wrote a thesis on population change in the USA, which includes fertility. He did considerable further research on related themes, including Rosenzweig and Evenson (1977) and Rosenzweig and Wolpin (1980).

At the University of Chicago, fertility-related research was produced by the following students of Becker: Dennis De Tray (1972), Alan Freiden (1972), Indra Makhija (1977) and Nigel Tomes (1978). In addition, fertility was the main topic of investigation in theses written under the supervision of Marc Nerlove (in the case of Jacques Silber's thesis, Silber 1975) and Robert Fogel (in the case of Richard Steckel 1977). Both Silber and Steckel presented their research in Becker's workshop. Within fifteen years of graduation Steckel also published on the economics of mortality using historical US data (Steckel 1986, 1988).

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<sup>15</sup> More about Silber and Steckel is found in the next subsection.

<sup>16</sup> Lloyd continued to publish further work related to the NHE (e.g. Lloyd and Niemi 1979, and Lloyd, Andrews, and Gilroy 1979) and to work on questions related to household economics, especially while employed by the Population Council.

## 5/ Economics of Parenting

Becker (1967) can be viewed as the pioneer NHE article on the economics of parenting, including parental investments in their children's human capital. Years later NHE-er James Heckman contributed a substantial amount of research on this topic, including Heckman et al (2014). Students of Becker and Mincer in the period we study also wrote on this theme. At Columbia, Arleen Leibowitz's thesis stands out in that it analyzed and measured parental inputs into the production of children's human capital (Leibowitz 1974). The dissertation of Linda Nasif Edwards' (1971) about teenagers' demand for schooling also belongs here. Later she authored a paper on child health with Michael Grossman (Edwards and Grossman 1979). Heckman's first PhD student at Columbia, Andrea Beller (1974) wrote a dissertation on a non-NHE topic. However, within 11 years of graduation, she embarked on two long-term projects related to the NHE, one on child support payments with John W. Graham<sup>17</sup> (e.g. Beller and Graham 1985, 1993; Graham and Beller 1989), and the other on family structure and children's outcomes (e.g. Krein and Beller 1988).

Chicago students also wrote about parenting in the 1970s, which is the period during which Becker and Lewis (1973) published an article about the trade-off between quantity and quality of children. H. Gregg-Lewis regularly attended Becker's workshop in the first part of the decade, until he moved to Duke University. De Tray (1972) and Nigel Tomes (1978) wrote about parental investments in their children's quality and fertility, and Lawrence Kenny's (1977) dissertation is about parental demand for child quality and the production of child quality. Indra Makhija's (1977) thesis is also about parenting: it looks at the nexus between child labor, fertility and children's school attendance in the context of rural India.

## 6/ Economics of Marriage

The NHE introduced the economics of marriage and marital sorting, propelled by Becker (1973), an article published after Becker's move to Chicago.<sup>18</sup> Prior to this move, the following students of Becker or Mincer at Columbia wrote about marriage or divorce (in chronological order): Morris Silver (1965, 1966), Shirley B Johnson (1967), Federica Pickford-Santos (e.g. Santos 1970, and Ofek and Pickford-Santos 1979), Elizabeth Durbin (1971, 1973), Marjorie Honig (1971), Robert Reischauer (1971), and Elizabeth Landes (e.g. Becker et al 1977 and Landes 1978). Of these, Honig is the only one who pursued an academic career, specialized in an area related to the NHE for most of her career, and accumulated a substantial publication record.

Two of Becker's Chicago students from the 1970s contributed the first econometric studies of marriage using large individual data sets: Michael Keeley and Amyra Grossbard (now Shoshana Grossbard). The outcomes they study are age at marriage (Keeley 1974, 1977, 1979) and number of wives (Grossbard 1976, 1978). Other students who wrote about marriage and studied with Becker at Chicago in the period under study are Alan Freiden (1972), who published an article based on his dissertation (Freiden 1974) explaining state-level marriage rates, Edy L. Kogut (1972), Walter Wessels (1976), and Ivy Papps whose dissertation was not

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<sup>17</sup> John W. Graham had been a student of Marc Nerlove's at Northwestern University, where Nerlove moved when he left Chicago in the mid 1970s.

<sup>18</sup> When awarding him the Nobel prize in 1992, the Royal Swedish Academy of Sciences highlighted Becker's "models of behavior of the family (or household), including distribution of work and allocation of time in the family."

related to the NHE, but who published a book popularizing the economics of marriage (Papps 1980).

What is unique about the economic models of marriage and divorce (including Becker 1973) is that the decision-makers are mostly individuals, in contrast to the models about the five prior outcomes in which multi-person households typically make decisions as if they were a single unit.<sup>19</sup> Becker hypothesized that how household resources are distributed towards each member's assignable consumption is a function of marriage market conditions.<sup>20</sup> Keeley and Grossbard built on Becker's marriage market analysis, adapting more elements of micro-economic modeling into analyses of marriage-related outcomes. Keeley's (1974, 1977) search theory of marriage has individuals comparing various 'marital wages', in analogy with models of search in labor markets.<sup>21</sup> In the context of an African polygamous society Grossbard (1976) also pursued the analogy between marriage markets and labor markets, conceiving of wives as household production workers getting paid for their work by husbands, the pay often taking the form of consumption goods bought by husbands for the benefit of a wife.

Starting in the 1980s a number of economic models elaborated on Becker's idea that factors such as the sex ratio or each household member's income are expected to affect individual outcomes of multi-person households. This includes NHE-related models analyzing how conditions in markets for workers in household production may influence participation in the *labor force* and *fertility* (Heer and Grossbard-Shechtman (1981) and Grossbard-Shechtman (1984, 1993)) and contributions from outside the NHE as defined here, including bargaining models dealing with intra-household distribution of consumption goods (e.g. Manser and Brown (1980) and McElroy and Horney (1981)) and models of intra-household distribution of consumption based on Samuelson's (1956) consensual approach such as Chiappori (1988) and Apps and Rees (1988).

### 3. Five observations sixty years after the NHE started

As steps towards the assessment of the NHE's impact on economics as a discipline we offer the following observations related to the accomplishments of the NHE. This is far from a comprehensive and systematic survey or a systematic assessment.

***OBSERVATION 1.*** One way to assess the value of the NHE is to observe that its founders, Gary Becker and Jacob Mincer, and some of its most talented contributors were awarded prestigious prizes or otherwise received public recognition. Gary Becker was awarded the Nobel prize in economics (in 1992), and the Nobel committee mentioned some of his contributions to the NHE in awarding him the prize. Jacob Mincer got the honor of being awarded the first IZA prize in labor economics in 2002 as well as the first career achievement award for lifetime contributions to the field of labor economics of the Society of Labor Economists in 2004. That prize was then named the Mincer award. In addition, both Becker and Mincer were named fellows of the American Academy of Arts and Sciences and of the National Academy of Sciences.

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<sup>19</sup> Becker's marriage market model is one of the multiple theoretical models of marriage contained in this theory of marriage. More on Becker's various theoretical models of marriage is found in Grossbard (2010).

<sup>20</sup> Many of the themes addressed by Becker in these individual articles were included in Becker's (1981) *Treatise on the Family*.

<sup>21</sup> Becker, Landes, and Michael (1977) also contains a search model of marriage.

Other NHE-ers who were awarded the Nobel prize in economics are T.W. Schultz (in 1979) and James Heckman (in 2000). Heckman, T.W. Schultz and NHE-er Victor R. Fuchs were also elected to the American Academy of Arts and Sciences, and Heckman and Schultz to the National Academy of Sciences.

**OBSERVATION 2.** The second observation focuses on the study of consumption (and savings) and labor economics, items 1 and 2 on the list of NHE topics of interest. These outcomes have been of central interest to economics at least since the early 20<sup>th</sup> Century. NHE innovated in these areas by bringing in household production. These innovations have had a considerable impact on various fields of economics, including labor economics, macro-economics, agricultural economics and development economics.

2.1. The study of labor supply and wage differentials has been transformed by the work of Becker (1965), Mincer (1962), Heckman (1974) and a number of other NHE-ers who have done research on that topic. Economic research on wages has also been deeply influenced by this tradition.

2.2. NHE ideas regarding the modeling of consumption were integrated within macro-economics. Indicative of this integration are articles about household production in macro-economics such as Benhabib et al (1991), Aguiar and Hurst (2005) and Ramey and Francis (2009).

2.3. NHE ideas have enriched agricultural and food economics, as is evident e.g. from Ed Taylor and Irma Adelman (2003) on agricultural household models and George Davis' (2014) survey article on production of food at home and food consumption.

2.4 NHE ideas have had an impact on development economics, as evident from the role that NHE-er Mark Rosenzweig has played in the growth of development economics as a field of economics (in his capacities as author, dissertation advisor and journal editor).<sup>22</sup> Examples of how some models by NHE-ers have offered micro-economic foundations for models of economic growth can be found in a recent survey by Manuel Santos Silva and Stephan Klasen (2021).

The other four outcomes on the list found in the previous section--health, fertility, child outcomes, and marriage—did not correspond to existing fields of economics prior to the birth of the NHE.<sup>22</sup> Today, some of these new fields have been integrated into the discipline of economics. Some NHE-ers deserve credit, not only for contributing to the new fields, but also for helping towards their integration into mainstream economics. The following observations expand on that.

**OBSERVATION 3.** Another way of assessing the success of new research topics developed by the NHE is to check whether the NBER has channeled any of its resources in that direction. Of the four areas of investigation spearheaded by the NHE the first—health economics --became associated with its own program or project at the NBER. The NBER also has a program called the economics of children, which includes both the economics of fertility and the economics of parenting. As for the fourth, so far, the NBER does not have a program on the economics of marriage and other relationships.

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<sup>22</sup> The topic of fertility had been addressed by economists many decades before the birth of the NHE, e.g. by Malthus. However, it was not addressed by mainstream economists for most of the 20<sup>th</sup> Century.



In 1980, *health economics* became the first NHE-inspired application that obtained its own program at the NBER, a program that focuses on the determinants of the health of the population. Fuchs decided he did not want to co-direct the program a few years later, so Grossman became the only director of this health program. Grossman remained in charge until 2020.<sup>23</sup> As mentioned in Beller and Grossbard (2019) the roots of this program go back to an NBER group named the Center for the Economic Analysis of Human Behavior and Social Institutions (CEAHBSI, also see Fuchs 2004).<sup>24</sup> This group, formed when the NBER's headquarters were in New York, was headed by Victor Fuchs from 1968 to 1978. Its research associates included NHE-ers Becker, Mincer, and Michael Grossman. The group dealt not only with health but also with other outcomes related to the NHE: fertility and investments in children's human capital. This center was dismantled in 1978 when Martin Feldstein became president of the NBER, succeeding John Meyer.<sup>25</sup>

The *economics of children* (including fertility and children's outcomes) was included in the research scope of the NBER when Meyer was still president, for fertility and parental investments in children's human capital were included among the topics studied within the framework of the CEAHBSI group. As a result, these themes—as well as the economics of marriage--were addressed during two conferences the NBER organized on economics of the family in 1972 and 1973 (see T.W. Schultz 1974, a volume published by the NBER). A decade later, in 1983, the NBER organized a conference on Income and Wealth at which Beller and Graham presented their first article on child support payments (Beller and Graham 1985); the conference led to a published volume of papers in the series of Studies in Income and Wealth (David and Smeeding 1985). However, another 10 years went by between that 1983 conference and 1993, the start of the children's program at the NBER. The new program was originally directed by Alan Krueger, then by Jonathan Gruber, and since 2009 by Janet Currie. In 2015 Anna Aizer joined her as co-director. No NHE alumni appear among the NBER's children's program's leadership.

Until its 1978 demise, the CEAHBSI at the New York NBER also facilitated research on the economics of marriage. So far, since its move to Cambridge the NBER has not organized projects on the theme of *economics of marriage and divorce*. This suggests that in 2020 the NBER considers health economics and economics of children as applications of economics closer to the core of the economics profession than the economics of marriage or divorce.

**OBSERVATION 4.** The dismantling of the Center for the Economic Analysis of Human Behavior and Social Institutions (CEAHBSI) in 1978 may have left a vacuum that needed to be filled. This helps explain the birth of a number of organizations facilitating research on some of the applications of economics that had been pioneered by the NHE-ers.

In the area of health economics the following professional organizations were created: the American Society of Health Economists (ASHEcon), the International Health Economics Association (iHEA), and the European Health Economics Association (EuHEA); and the following journals started publication (starting dates in parentheses): *Journal of Health Economics* (1982), *Health Economics* (1992), *the European Journal of Health Economics*

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<sup>23</sup> As of December 2020, he still directs NBER's New York Office. Another health economics program at NBER focuses on the functioning of markets for health insurance and medical care.

<sup>24</sup> Victor Fuchs, Michael Grossman and James Poterba contributed to this paragraph via personal emails.

<sup>25</sup> More on the history of the NBER can be found at <https://www.nber.org/about-nber/history>.

(2000), *Economics and Human Biology* (2003), and the *American Journal of Health Economics* (2014). The first two originated in the period 1978 to 1993, when the NBER did not have a health economics program.

Despite their relatively young age these health economics journals get quite a few citations. Consequently, health economics is one of the special fields included in a recent article published in the *Journal of Economic Literature* that reviews citations from different fields of economics (Angrist et al. 2020). In contrast, that same article does not explicitly mention contributions to the economics of children or the economics of marriage.

A number of new organizations and journals that deal with the economics of children have sprung up in recent years.

a/ ESPE, the European Society of Population Economics, was founded in 1986. It is connected to the *Journal of Population Economics*.

b/ The Center for Household, Income, Labour and Demographic economics (CHILD) organizes research on the impact of family and educational policies on child outcomes, fertility and labor market decisions. It was founded in 2000 by Daniela del Boca at the Collegio Carlo Alberto in Torino, Italy. The organization has been influential in the USA and UK, as is apparent e.g. from its inclusion of researchers from universities such as New York University, University College London, University of Pennsylvania, University of North Carolina Chapel Hill, York, Royal Holloway and Stanford.

c/ BREAD, the Bureau for Research and Economic Analysis of Development was founded in 2002. BREAD has fellows who often write on non-monetized outcomes covered by the NHE, including fertility, investments in children's human capital, marriage and divorce. One of its first fellows was NHE-er Mark Rosenzweig, who serves on the organization's executive committee. Many other BREAD fellows have contributed to the economic literature on the economics of children or the economics of marriage.

d/ The *Review of Economics of the Household* (REHO), started in 2003 by one of us (Shoshana), has strong connections to the NHE. It publishes articles on all six topics covered by the NHE. In addition, it also publishes articles on a variety of household decisions regarding consumption, savings and gambling etc. that don't involve household production. The NHE's founders—Gary Becker and Jacob Mincer--endorsed the original proposal to start the journal and served on its advisory board until they passed away. Also connected to the journal in one or the other capacity are (were) NHE-ers Barry Chiswick, Victor Fuchs, Michael Grossman, James Heckman, Jacob Mincer, and Solomon Polachek. Other students of Becker or Mincer who serve or have served on the board include Andrea Beller, Glenn Blomquist, and Carlos Seiglie.

e/ The *Journal of Human Capital* was founded in 2007 by Isaac Ehrlich, who was a student of Becker and Mincer at Columbia University. It publishes some articles on parenting and family economics.

f/ In 2010 NHE-er James Heckman established the Human Capital and Economic Opportunity (HCEO) global working group at the University of Chicago, promoting further work on the economics of parenting and children and a number of other topics related to economics of the family. Its main activities are conferences, a working paper and policy paper series, and a summer school.

g/ SEHO, the Society of Economics of the Household (founded in 2017 by Shoshana Grossbard) organizes yearly conferences on the topics covered by the *Review of Economics of the Household*.

There are no organizations exclusively dedicated to the economics of marriage, divorce, and cohabitation, but journals and organizations listed in this sub-section have offered some degree of support to researchers studying marriage, cohabitation and divorce.

In conclusion, in this respect too health economics appears to be in better shape than other branches of the NHE, such as the economics of children and the economics of marriage.

**OBSERVATION 5.** This observation deals with the individual success of economists who (a) completed a doctoral dissertation between 1960 and 1980 at Columbia or Chicago that focused on one of the six outcomes central to the New Home Economics,<sup>26</sup> (b) had an academic career for most of their work life past graduation during which they further addressed NHE-related topics of research,<sup>27</sup> and (c) produced a substantial amount of publications. This list includes the following ten Columbia students who graduated between 1964 and 1975 (in alphabetical order): Edwards, Ghez, Gronau, Grossman, Honig, Leibowitz, Michael, Ofek, Polachek, and Rosenzweig,<sup>28</sup> and five Chicago students who graduated between 1972 and 1978 (in alphabetical order): Grossbard, MaCurdy, Randy J. Olsen, James P. Smith and Richard Steckel (see Section 2 above for more details about these individuals).<sup>29</sup>

Of these fifteen students many are active in research; most retired from teaching or passed away. Next, we report their current or last title and whether they are still alive (in alphabetical order): Linda Nasif Edwards (Professor of Economics Emerita, the Graduate Center, City University of New York), the late Gilbert Ghez (was a professor at Roosevelt University in Chicago), Reuben Gronau (Professor Emeritus at Hebrew University in Jerusalem), Shoshana Grossbard (Professor of Economics Emerita and scholar-in-residence at San Diego State University and editor-in-chief of the *Review of Economics of the Household*), Michael Grossman (Distinguished Professor of Economics Emeritus at the Graduate Center, City University of New York and New York Office Director and Research Associate at the NBER), the late Marjorie Honig (Professor, Hunter College and The Graduate Center, City University of New York), Arleen Leibowitz (Professor Emerita at the department of public policy in the UCLA Luskin School of Public Affairs), Thomas E. MaCurdy (Professor of Economics at Stanford University and Senior Fellow at the Hoover Institution and the Stanford Institute for Economic Policy Research), Robert T. Michael (the Eliakim Hastings Moore Distinguished Service Professor Emeritus at the Harris School of Public Policy and researcher at NORC, University of Chicago), Haim Ofek (Professor Emeritus at SUNY-Binghamton), Solomon Polachek (Distinguished Professor at SUNY-Binghamton), Mark Rosenzweig (the Frank Altschul Professor of International Economics and director of the Economic Growth Center at Yale University), and James P. Smith (Senior Economist Emeritus, RAND).

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<sup>26</sup> The following list is more restricted than the list of students mentioned in Section 2, where graduates who had trained with Becker or Mincer and wrote dissertations on other topics, and later engaged in NHE-related research, were also included.

<sup>27</sup> An academic career implies affiliation with universities or research organizations such as RAND for most of their working years.

<sup>28</sup> The following Columbia students did not spend most of their post-doctoral years pursuing an academic career: Elizabeth Landes and Federicka Santos. Columbia graduate who continued an academic career but did not publish much that is related to the NHE: Morris Silver.

<sup>29</sup> Chicago graduates who left academia at a relatively early stage in their career: Alan Freiden, Michael Keeley, Edy Kogut, and Nigel Tomes. Chicago graduates who continued an academic career but did not publish much that is related to the NHE: Anne Williams, Lawrence Kenny, Jacques Silber, John Turner, and Walter Wessels. The whereabouts of Indra Makhija are unknown.

This sample of fifteen started with a similar background—training in NHE under the guidance of Mincer, Becker, Heckman, or another NHE-linked professor in the period 1960-1980, spent most of their adult life in academia and wrote extensively on the following NHE applications: health economics, labor supply and wage determination, consumption economics, economics of children or economics of marriage. Eleven of these academic economists are men and four are women.<sup>30</sup> Eleven are US-born and four were born in Western Europe (Ghez and Grossbard) or Israel (Gronau and Ofek).

The list expands if we also consider graduates of Columbia or Chicago with the same credentials as the above group of 15, but who did not write a thesis related to the NHE. In that case we add the following Columbia students: Andrea Beller (Professor Emerita, University of Illinois at Urbana-Champaign), Barry Chiswick (Professor, Department of Economics, George Washington University), June O’Neill (Professor Emerita, Baruch College and the Graduate Center, CUNY). We also add the following Chicago students: Claudia Goldin (Professor, Department of Economics, Harvard University) and Christopher Robinson (Professor, University of Western Ontario, Canada)

#### **4. Conclusions**

Sixty years have passed since the birth of the NHE, a school of economic thought that was founded by Gary Becker and Jacob Mincer and that placed household production at its center. It generated economic analyses regarding the following principal outcomes: consumption, labor markets, household decisions regarding health, children (fertility and children’s human capital), and marriage. This article listed some of the major researchers associated with the NHE and some of their principal publications. Many were students of Becker or Mincer at Columbia or Chicago. Some were students of James Heckman or other faculty associated with Becker or Mincer.

We made a few observations that help assess the success of the NHE as a school of thought and of some of the students who graduated at the height of the NHE and specialized in this area. In sum, the following was observed: (1) Becker, Mincer and some others associated with the NHE have received major awards, in part in recognition for ideas associated with the NHE; (2) the NHE’s contributions to the study of consumption and labor markets have been well-integrated into mainstream applications of economics, two outcomes that have been of interest to economics at least since the early 20<sup>th</sup> Century; (3) NBER inclusion of new applications of economic investigation spearheaded by the NHE (applications to household health and to children-related issues) can be viewed as a testimony to the NHE’s success. This is especially true in the case of health economics, as NHE-er Michael Grossman has played a central role in the growth of the health program at the NBER, but also holds to some degree in the case of the economics of children, an NBER program without much direct input from NHE-ers; (4) the NHE may also have encouraged the growth of other organizations promoting research in economics on households and families; and (5) the academic success of some of the students of Becker, Mincer, and Heckman who specialized in NHE can be partially interpreted as indicators of the NHE’s success.

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<sup>30</sup> More on gender and the Columbia labor workshop (which was not limited to NHE) in Grossbard-Shechtman (2001a) and Beller and Grossbard (2019).

There is need for more research on the impact of the New Home Economics and the household production concepts it placed at the center of economic analyses of decisions made in households. It is hoped that further research will shed more light on this impact.

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