# *Add Women and Stir: Esther Duflo and Feminist Epistemology of Randomized Control Trials in the Field of Development*

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*"Something that we did not anticipate, however, has undoubtedly happened: randomized controlled trials have, if not revolutionized, at least profoundly altered, the practice of development economics as an academic discipline."*

*- Esther Duflo*

**Abstract:** In 2019, Esther Duflo became the second woman to ever win a Nobel Prize in Economic Sciences for her groundbreaking contributions to development economics through the innovative application of randomized controlled trials (RCTs). Duflo's transformative approach involved adapting RCTs from the medical field to address complex social issues. As Duflo gained prominence, she endorsed a shift towards empirically driven and gender-blind development policies. Her endorsement prompted scrutiny from the feminist economist community who argued that Duflo's RCT method came with limitations that overshadowed its potential to address systemic inequalities, specifically women's empowerment. Duflo's decision to pioneer the use of RCTs in the field of development has sparked a question within the economic community: what form of research methodology works to achieve both gender equality and holistic development goals?

**A Pioneer in the Field**

In October 2019, Esther Duflo along with Abhijit Banerjee and Michael Kremer jointly won the 51st Sveriges Riksbank Prize in Economic Sciences in Memory of Alfred Nobel. They were recognized "for their experimental approach to alleviating poverty" and for transforming the long-standing randomized controlled trial (RCT) methodology used in the medical field into a tool to study social issues (The Royal Swedish Academy of Sciences 2019, n.p). Since Duflo and her co-researchers championed the tool beginning in the early 2000s, the use of the RCT approach has flourished in the field of development for academics and development experts alike. Now, when researchers and policymakers look for ways to mitigate global poverty and to understand the origins of poverty, they look to RCTs—which would quickly become known as "the Gold Standard" (Hariton and Locascio 2018, n.p).

Duflo was the second woman in history to win a Nobel Prize in Economics and the only living female laureate (Dizikes 2019, n.p). Duflo became something of an idol to women in economics: she was proof that there was a place for women to excel and make change in a predominantly male-dominated field (Nobel Prize 2019, n.p). On October 14th, 2019, Duflo received a call from the Nobel Prize organization for a telephone interview. Recorded just after the public announcement of her award, interviewer Adam Smith and Duflo discussed the lack of

women in the field of economics. Duflo told Smith that women's place in economic research is hopefully on a progressive path towards equality. (Nobel Prize 2019, n.p). She reflected on the structural issues in economics that prevent more women from entering the field. Duflo told Smith that if the "larger presence of women in the younger cohorts" are to continue pursuing a career in economics, then the profession itself is going to have to become "more feminist" (Nobel Prize 2019, n.p).

As a self-proclaimed feminist economist, Duflo attracted attention from the feminist economic and research community. RCTs began to shape the field of development as the primary form of research and RCT-generated data began more frequently directing policy recommendations. The method, however, was not universally acclaimed and feminist economists worried the limitations of the approach may outweigh the benefits (Reddy 2019, n.p). Using a critical feminist lens, economists began to challenge the effectiveness of RCTs and whether they were conducive to achieving gender-based equity.

**The Change-Making Economist**

Esther Duflo was not destined to become an economist. As the daughter of a mathematician, Duflo grew up with idols like quantitative historian Emmanuel Le Roy Lauderie and dreamed of becoming an academic. As the daughter of a pediatrician, Duflo was inspired by her family's dedication to help others less fortunate than herself (Duflo 2019, 439). She began her schooling with the ambition to combine her pursuits of academia and making meaningful change in the world.

Born in Paris, France in 1972, Duflo grew up studying history and developed an early interest in global poverty. She began learning more about "poverty traps" that cyclically limited opportunities for the poor. Duflo imagined that if she could only identify and eliminate these traps, she could work towards reducing global poverty as a whole (Ellison 2022, n.p).

For Duflo, the thought of pursuing a degree in economics to reduce global poverty did not seem plausible until late in her college career. Duflo spent most of her college years agreeing with the widely held view that economists' findings should not be trusted (Smith 2017, n.p). Young Duflo believed economists use rudimentary math to prove that the markets are smooth-functioning and that any intervention would be detrimental to the balance of the economy. She resolved to never pursue her dreams of change-making through economics. She maintained this pessimistic view of the field until she spent a year working as a research assistant for a team of economists at the Social Sciences University in Moscow. Her experience helped Duflo discover with, in her words, "a mix of horror and fascination" how economists can deeply influence global conditions (Duflo 2019, 440). She witnessed economists gain policymakers' trust in their appeals to ignite positive change. Policymakers were taking recommendations from economists seriously and using them to create laws, enabling real change to unfold on the ground.

However, during her time working with the economic team in Russia, she noticed the large-scale experiments that the economists were conducting on the national economy faced extensive challenges. They were using macroeconomic approaches, meaning they were only looking at the economy as a whole and not at individuals or communities. Moreover, their approach, based only on theory, was not conducive to real change because it couldn't properly identify issues that were causing poverty (Duflo 2019, 440). Duflo kept this observation in mind when she moved to America to complete her doctorate in her newfound interest in economics at the Massachusetts Institute for Technology (MIT).

Duflo began working with her MIT economic professors Abhijit Banerjee and Michael Kremer to implement an experimental method to test theories for reducing poverty. They advocated for an approach that consisted of breaking large global poverty issues into smaller pieces. The team found inspiration in medical clinical trials that used a treatment group and a control group to answer smaller questions like "will this vaccine work?" Duflo considered whether they could apply this method to development economics. Instead of undertaking questions about how to solve global poverty, the team could pinpoint more easily solvable issues to avoid the obstacles Duflo witnessed in Russia's macroeconomic approach (Duflo 2019). Experimentation could tackle more focused questions like "if we give bed nets to this village, will it decrease malaria cases?" Policymakers sought meaningful solutions to address poverty, with at least a modest guarantee of effectiveness, and Duflo believed she could provide these solutions with her experimentation.

Duflo's approach would manifest as Randomized Control Trials (RCTs), now used in both medicine and the social sciences, thanks to Duflo and her team. An RCT is an experimental method to evaluate the impact of an intervention on a population. The experiment includes a treatment group (often more than one) and a control group. The treatment group is chosen at random from the eligible population, a group of people who are qualified to receive program services. The control group is also chosen at random from the same population. The treatment group is given some form of intervention and the control group's conditions remain unchanged (Gibson et al. n.d, n.p). The main objective of an RCT is to isolate the influence that a specific intervention has on a population by noting the different outcomes between the treatment and control group.

Because an RCT produces numbers, or quantitative data that can be directly observed, Duflo realized the empirical analysis RCTs could provide for development programs. Running RCTs allows development research to transition from broad questions (why countries are poor, for example) to localized, more answerable questions (how to increase immunization rates in this village, for example).

Duflo created a lab, the Jameel Poverty Action Lab (J-PAL), where Duflo and her partners would pioneer the use of randomized control trials in development economics. Proponents of Duflo's method would deem themselves "randomistas"—those who believe that RCTs are the optimal form of research due to the method's ability to enact concrete solutions to global poverty (Kabeer 2020, n.p).

**The Rise of RCTs**

In the medical field, RCTs have guided research for the past half-century. In the development community, the RCT method did not take hold until the 2000s. Before the rise of the RCT, the World Bank and the International Monetary Fund (IMF) relied on the "Washington Consensus" as their recipe for development solutions. The Washington Consensus was originally coined by economist John Williamson in 1989 while working on development efforts in Latin America. The Washington Consensus was a set of economic development reforms that led leaders on Capitol Hill to make ill-informed assumptions about what foreign countries needed. The Consensus used reform values contingent to the United States, producing similar neoliberal solutions for non-similar issues across a span of developing countries. Popular neoliberal approaches included the liberalization of trade and the deregulation or privatization of markets, which did not always benefit the target country (Jatteau 2013, n.p).

The Washington Consensus eventually lost support due to the lack of measures in the theory-based approach to identify and address systematic market failures in developing countries (Mullock n.d, n.p). Ultimately, the Washington Consensus was not conducive to long-term economic growth and triggered economic stagnation in developing regions such as Latin America. The United Nations goes as far as to call the 1990s the "lost decade for development" (Jatteau 2013, n.p). When the Washington Consensus lost support, research in economics was left without a dominant paradigm. Duflo and co-researchers recognized this opening as an opportunity to implement RCTs in the field of development and, hopefully, enact long-term change.

In 2006, Researcher Pascaline Dupas, working with Duflo's lab, J-PAL, conducted a randomized experiment that captured the motive and process behind an RCT (Cohen et al. 2010, n.p). Dupas had befriended a young mother in Kenya who was struggling to afford medication to treat her infant son with malaria. Dupas wrestled with the question of why this mother hadn't secured a bed net to prevent her son from contracting malaria in the first place. She asked her friends back home to donate to a charity that would provide free bed nets to Kenyans in need. However, few charities existed that would distribute bed nets. Standard economic theory critiques free goods because people will devalue those goods, potentially distorting markets, leading charities to avoid distribution of goods like free bed nets. Dupas decided to test this criticism using Duflo's RCT method. She conducted an RCT with varying prices for bed nets in a Kenyan community. The results proved that free goods, at least in this case, did not lead to the goods being devalued or to market price distortion. Policy recommendations were altered accordingly, and enough bed nets were distributed to prevent an estimated 450 million cases of malaria and 4 million deaths (Bhatt et al. 2015, 207).

What made RCTs such an important methodological novelty for economics? Within the development community, economists have long grappled with assessing development programs without any directly observable quantifiable data. The lack of empirical evidence made it difficult to tell which interventions worked—for instance, people who fared better after the intervention were often more motivated or in better positions to take advantage of the intervention (Reddy 2019, n.p). The randomistas offered a solution: conduct social experiments on populations to get observable evidence. Economists could use the RCT to isolate the evidence by selecting treatment groups at random, so the recipients of the intervention were not necessarily more motivated or better positioned.

Externally, a widespread collapse of confidence in public policy's ability to implement change also worked in the randomistas' favor. Lesser developed countries around the world were experiencing ongoing economic crises, and the foreign aid from the IMF and the World Bank did little to help. Doubt from the public and researchers began to culminate about whether international aid was an efficient way to stimulate economies (Swaroop 2016, 4). Interest in different economic approaches to development began to grow. Again, randomistas offered a solution: test small-scale issues, like distributing bed nets, on affected populations.

Prior to winning the Nobel Prize, Duflo gave a presentation at the Institute for Data, Systems, and Society seminar held at MIT in 2016 titled "Randomized Controlled Trials and Policy Making in Developing Countries." During her presentation, Duflo delves into the process of running an RCT and its impact on guiding aid and policy. She claims that RCTs are key to identifying issues that cause cyclical poverty in a way that qualitative, less empirical methods, cannot. She also claims that RCTs can determine causal analysis; X happens, and it leads to Y. Causal analysis, a concept extremely sought-after in development, allows policymakers to identify exactly where to direct aid and policy to mitigate issues in lesser-developed countries.

Duflo says that if she can determine causation between two variables and identify a solution, then she can implement her experiments on a much larger scale everywhere in the world. For instance, she could take the results from the bed net experiment and use them as evidence that if bed nets are distributed around the world, malaria could be effectively eradicated. By transitioning away from macro-level studies and towards micro-level studies, Duflo attempted to prevent overreliance on questionable theory or statistical methods, such as the Washington Consensus, and instead rely on observable, quantifiable data to guide development policy.

**Distortions of Gender-Focused Policies**

After graduating from MIT in 1999, MIT immediately hired Duflo and she continued working with Banerjee, her now husband, at J-PAL. Duflo and Banerjee created the lab specifically to bring science into the battle against poverty, particularly to support the use of RCTs in this fight. Beginning the battle, J-PAL held a project in rural Rajasthan, India. Duflo and her colleagues set out to assess the efficacy of modest non-financial incentives and the presence of clinic services on immunization rates in children aged one to three (Banerjee et al. 2010, n.p). Results from the interventions revealed that among children aged one to three years, 16.6 percent were fully immunized where immunization clinics were heavily publicized, but not incentivized. In the villages where incentives were given in addition to holding immunization clinics, 38.3 percent of children were fully immunized. In the controlled villages, 6.2 percent of children were fully immunized. The results concluded that children were more likely to get immunized in villages with access to immunization clinics and incentives.

Duflo's immunization study in Rajasthan produced undeniably useful results for improving immunization rates, but the feminist economic community believed that the study should have taken gender into account when analyzing immunization rates. The study was gender-neutral, meaning Duflo implemented interventions that held no regard for immunization based on gender. Duflo did not note differences in gender-related aspects to immunization such as physical reactions, cultural norms, or accessibility. In the study's discussion, however, Duflo drew gendered implications from the results. Duflo concluded that there was very little difference between immunization rates between boys and girls; children in their respective intervention sets were immunized at similar rates, regardless of gender. She claimed that interventions specific to gender were not necessary to make such a conclusion (Duflo 2012, 1055).

Duflo published an essay, "Women Empowerment and Economic Development," after running the RCT in Rajasthan, claiming that the randomized nature of the trial proves the absence of everyday gender discrimination in India (Duflo 2012, 1055). Duflo concludes that gender-blind experiments, such as her RCTs, and subsequent gender-neutral policies are the best approaches to achieving gender equality, given objective research methods avoid distortion of data and efficiently allocate resources for development (Kabeer 2020, n.p). The term "distortion," to Duflo, refers to the potentially unrandomized data and the extra costs associated with gender-specific policies. She also believes that taking gender into account in an RCT introduces methods like quotas for the number of women involved in the study, which rejects the randomization of the RCT.

Duflo cites two pieces of evidence to support the claim that gender-focused policies introduce distortions to development. First, she claims that while gender equity is a "very desirable goal in and of itself," gender-focused policies may not be sufficient enough to compensate for the costs of distortion (Duflo 2012, 1076). Duflo said that, despite the positive social impacts of gender-focused policies, "the usual depiction of women as always making the best decisions for

long-term development is somewhat exaggerated" (Duflo 2012, 1053). Duflo concluded that this exaggeration will lead to distortion in how policies work in reality.

Second, Duflo cites her own study, coauthored with Raghabendra Chattopadhyay, which examines the impact of quotas for women in local Indian government. They find that women-led local councils in West Bengal and Rajasthan invested more in public goods closely aligned with concerns that women had raised, such as increased access to drinking water. Public goods that men prioritized, such as roads and education, were invested in less (Raghabendra and Duflo 2004, 1411). Duflo comments that the investments were good for women; however, it was unclear whether the investments resulted in an improved development outcome for the entire community. The primary benefit of improved access to drinking water was a reduction in the time that young girls spent collecting the water, which Duflo refers to as a matter of convenience. She argues that economists cannot answer the question of "how one values this convenience, versus educating children or better roads…" (Duflo 2012, 1075). Duflo finds that a reduction in women's time spent collecting drinking water does not necessarily have the same utility as improved development for the entire community, not just women.

Additionally, Duflo argues that gender-focused policies that distort the allocative processes of development programs and augment economic inefficiencies could prove more harmful to women. For example, an analysis of an RCT held in Sri Lanka found that access to microcredit loans increases profits for male but not female entrepreneurs (Karlan and Zinman 2011, 1042). Duflo argues that policymakers often are too quick to conclude that an allocation of resources toward women, rather than men, would always be efficiency-enhancing (Duflo 2012, 1067). She also commented on the direct expense that gender-focused policies would have on boys, saying that any position a woman gets because of a quota "is a position a man doesn't get" (Duflo 2012, 1063). Duflo concludes that while gender equity is a desirable goal, "the policies that explicitly favour [sic] women need to be justified, not just in terms of being necessary to bring about gender equality, but in terms of gender equality itself being worth the cost it implies" (Duflo 2012, 1063). Duflo frames the redistribution of resources to a marginalized group as a potentially unworthy cost and in doing so, her opinion works as a catalyst in feminist economists' critiques of her approach.

Daniel J. Corsi, an epidemiologist and quantitative methodologist, disagrees with Duflo and her claim that gender-neutral experiments are the most effective method to direct policy. As a rebuttal to Duflo's claim of a lack of everyday gender discrimination, Corsi asserts gender discrimination persists in healthcare. In a study conducted between 1992 and 2006, Corsi found that girls received significantly lower immunization coverage than boys at the national level (Corsi et al. 2009, n.p). Corsi's study analyzed immunization rates nationwide and found that gender inequities varied considerably by state, with Rajasthan being one of the only two states to have little difference in immunization rates between boys and girls. Corsi suggested gender-neutral interventions, such as Duflo's, are unlikely to remedy the inequity. The contrast between Duflo's method is stark; Duflo's RCT method spanned over a very short time period and had a small population—aligning with the nature of an RCT experiment itself. Corsi's methods included analyzing data from the Indian National Family Health Survey over the course of fourteen years. Corsi concluded that gender discrimination persists in Indian healthcare, while Duflo's brief snapshot of one state suggested the opposite. The difference in conclusions calls for an examination of Duflo's experimental method and its effect on gender equality.

**The Women Empowerment-Development Relationship**

Economists in development have long been preoccupied with the relationship between women's empowerment and economic growth. Duflo took on the task of determining the impact of gender equality on economic growth and vice versa. In her "Women Empowerment and Economic Development" essay, the same essay discussing the distortions within gender-focused policies, she challenged claims that women's empowerment will "cause development" or that development will lead to women's empowerment. She concluded that *both* sets of relationships were weak and inconsistent. Duflo distinguishes that while she supports gender equality, it is not a contributing factor toward development and may even be harmful to growth (Duflo 2012, 1051).

Duflo's findings and analysis directly challenge feminist economists' push for gender-focused policies to increase women's empowerment (Kabeer 2013, n.p). Duflo argues that gender-blind policies that improve the economic welfare of households can improve gender equality (Duflo 2012, 1058). Essentially, Duflo believes that gender equality can be achieved with policies that do not directly address gender issues. She provides examples of pathways through which broad development processes, not gender-specific processes, have promoted gender equality. One pathway is reducing poverty in households. This pathway would, in theory, reduce the burden women typically face of putting others' basic needs, like food or healthcare, before themselves. Duflo suggests implementing gender-blind policies to reduce poverty, subsequently mitigating the harsher effects that poverty has on women. Duflo claims the best way to direct such gender-blind policies is through RCTs.

Feminist economists do not directly refute that gender-blind policies can promote gender equality. Instead, feminist economists are more likely to critique the methods through which Duflo acquires and interprets data to direct these policies. Feminist economists claim that Duflo's RCT method is restrictive in nature and produces selective evidence that overshadows qualitative data—consequently, findings present a partial reality of what development aid communities need (Kabeer 2015, n.p).

Naila Kabeer and Luisa Natali argue that Duflo's findings require a fresh look. Kabeer, an economist and Professor of Gender and Development at the London School of Economics, and Natali, a Social Policy Specialist at UNICEF, sought to examine the relationship between women empowerment and development. They compiled findings from studies that analyzed the effect of gender equality on economic development and, conversely, the effect of economic development on gender equality. They summarize their findings in their article, "Gender Equality and Economic Growth: Is There a Win-Win?" Their findings suggest that gender equality positively contributed to development, opposing Duflo's claim that the relationship is weak. On the other hand, the reverse effect of economic development on gender equality was not as robust. Kabeer and Natali use this evidence to support the argument that women's empowerment is necessary for economic development. Furthermore, because economic development has little effect on women's empowerment, gender-blind policies will not lead to gender equity. As Kabeer points out in a previous study, "the forces that create inequalities of wealth in a society embody quite different social norms…to those which create inequalities of gender" (1996, 11). Development policies would need to specifically address gender inequalities if the policies are to induce development of any kind. They argue that Duflo's use of RCTs confines her evidence to only a micro-level interpretation and rests on a very thin empirical base. By this, they mean an RCT only takes data from a small population and fails to capture the entirety of the issue that the RCT aims to evaluate. The small scale of an RCT could make it difficult to generalize solutions because the results from the sample may not represent the population as a whole.

Kabeer and Natali also claimed that Duflo's beliefs are deeply rooted in neoclassical economics—an economic theory that says human behavior is motivated by the desire to maximize individual utility, or that humans are innately selfish. Kabeer and Natali drew on feminist institutional economics to refute this stance on human behavior and instead provide an alternative explanation. They looked at other contexts, such as historical, social, and economic factors, that could potentially influence human behavior, particularly women's behavior, to offer a different interpretation of Duflo's empirically driven, not human-based, evidence. The use of broader contextual factors aided Kabeer and Natali's more pluralistic approach—where both qualitative and quantitative data is taken into account. They claimed this approach is more in line with feminist economics and provides a better understanding of the complexities of the women empowerment-development relationship.

**Feminist Epistemologies, Economics, and Development**

Feminist economists claimed that Duflo treated human preferences as random and idiosyncratic—meaning there is no rhyme or reason to each person's preferences and each preference is unique to that individual (Kabeer 2020, n.p). Duflo's stance on preferences was rooted in neoclassical economics—a mainstream approach that emerged in the nineteenth century. Feminist economists have long espoused that the formation of preferences is not random and idiosyncratic, but instead, preferences are built from social influences, such as gender (Kabeer 2020). Feminist economists believed that Duflo's RCTs were designed based on the assumption that preferences are random and therefore cannot appropriately account for gender disparities in development.

Feminist economists' critiques of Duflo's methods invite an appraisal of methodologies in the general sense. In 2009, Elinor Ostrom became the first woman to win an economics Nobel Prize for her work in development, just a decade before Duflo did the same. Notably, Ostrom and Duflo both focused on development processes surrounding allocation of resources and reducing poverty. They both used experiments in their investigations but with different methods.

Duflo used RCTs, the so-called gold standard, to produce what she considered hard evidence, or findings that can be measured as definitively true. Ostrom combined qualitative and quantitative methods to conduct field experiments—contesting the idea of just one gold standard (Labrousse 2016, 293). Different epistemologies, or theories of knowledge, supported Duflo and Ostrom's divergent methods. Both of their approaches to knowledge production in development research had a significant influence on development policy—leading feminist economists and economists alike to debate the best method. Duflo's approach aimed to randomize selection and identify specific outcomes that could be scaled up to improve development outcomes. Ostrom's approach, on the other hand, was more focused on understanding the institutional arrangements that shaped development outcomes. Ostrom's method emphasized the importance of studying the social complexities that affect how communities make decisions. Her approach emphasized how participatory, context-specific conditions influence a community's resource management. Feminist economists consider Ostrom's method the "feminist" approach because of her holistic methodology that accounts for social hierarchies and supports women's empowerment (Berik 1997, n.p).

Duflo and Ostrom's respective mission statements highlight the differences in the two women's research methods. Notably, Duflo's statement emphasizes scientific evidence while Ostrom signifies power dynamics in research.

Duflo's lab, J-PAL, summarized its mission on its webpage:

> J-PAL's mission is to reduce poverty by ensuring that policy is based on scientific evidence [. . .] J-PAL and its partners are driven by a shared belief in the power of scientific evidence to understand what really helps the poor, and what does not. (J-PAL 2014, n.p.)

A brief summary of the idea behind Ostrom's mission:

> Somebody who takes the perspective of an omniscient observer will assume that he can "see" the "whole picture, "know" what is "good" for people [. . .]. Such a presumption is likely to increase proneness to error. Fallible men require reference to decision-making processes where diverse forms of analysis can be mobilized and where each form of analysis can be subject to critical scrutiny of other analysts and decision-makers. (Ostrom 1973, n.p.)

Interpretations of analysis in research from Duflo and Ostrom's respective platforms help to reveal what exactly a "feminist" approach is. J-PAL asserts the power of scientific evidence to clear the path toward poverty eradication, with little room for divergence. Ostrom, however, claims this "one size fits all" analysis is likely to increase proneness to error. She instead wants to observe different forms of explanations for field data to produce more well-rounded and contextual knowledge. Feminist researchers claim that knowledge is never complete and their conclusions only provide a partial understanding of the issues communities face, given researchers are not part of the community themselves (Stanley and Wise 1993, n.p). The embrace of the partial understanding of knowledge supports the feminist claim that "knowledge is contextually specific and not independent of the person(s) who produce it" (Duran 1991, 2). This assertion circles back to Ostrom's approach that acknowledges factors that may affect data from field research, such as ethical and political issues.

For instance, Ostrom conducted extensive fieldwork in Nepal where she studied irrigation systems and how they were managed by local communities. She collected data on factors such as water use, agricultural productivity, and social organization. She used statistical methods to analyze the data and identify patterns in how the irrigation systems were managed. Her approach emphasized the importance of understanding context-specific factors that shape development processes, such as cultural norms and social networks. She also involved the local communities in the research process and worked collaboratively with them to identify solutions to resource allocation. Through these methods, Ostrom was able to direct development policy on irrigation system management.

Ostrom rejected the idea of objective knowledge and instead prioritized the situated, subjective experiences of individuals and communities. Feminist economists applauded this method because, according to them, feminist epistemology does not assume the "generalizability of our knowledge and experiences (Ardovini-Brooker 2002, 2). Since RCTs attempt to determine generalizable solutions to eradicate poverty, Duflo's approach warrants a critical assessment from the economic community.

**Dynamics of Power**

If feminist epistemology "seeks to unmake the web of oppressions and reweave the web of life," then dynamics of power and authority in research also require a critical eye. Proponents of

feminist epistemologies allege that a key area of the feminist research process is the lack of a hierarchical relationship in the relationship between researchees and researchers (Duran 1999, 4). Despite J-PAL's notable success as an institution, the processes by which J-PAL implements randomization may conflict with the feminist approach, potentially hindering efforts for women's empowerment and economic development.

When Duflo conducted a study through J-PAL, it contained a fairly distinct division of labor. The authors of the study, composed primarily of academics like Duflo, spearheaded design and interpretation within the study. Meanwhile, research assistants and local field workers carried out the work on the ground. Duflo *de facto* assigned the fieldwork crew, those working directly with the subjects of the experiment, to government officials, NGO workers, or local leaders, reducing interaction between the subjects and lead researchers. Also working in the field were research assistants, primarily undergraduate or graduate students from Europe or America's most prestigious universities (Jatteau 2013, n.p). Feminist economists claimed the division of labor created a sort of elitist-based hierarchy with a lack of understanding of the individuals being studied—potentially rendering policy suggestions ineffective (Jatteau 2013, n.p).

Siding with feminist economists, Ostrom disapproved of this hierarchical relationship. In her evaluation report for the Swedish International Development Cooperation Agency, Ostrom recommended that all those affected by projects—particularly the beneficiaries—should be involved in the evaluation of projects before, during and after the research (Ostrom et al. 2001, 250). This type of relationship, she says, would encourage participants, from beneficiaries to donors to contractors, to place values on each other's emotions and experiences. This manner of acknowledging the humanistic sides to science as valuable aspects of the research process is also a key area of feminist research that draws from feminist epistemologies (Ardovini-Brooker 2002, n.p). Conversely, Duflo and other randomistas feel that emotions would get in the way of RCT's objectivity and therefore distort the data.

Feminist economists view knowledge as a socially constructed process that is constantly evolving and fallible. Duflo, however, views knowledge as "objective and technical" (Labrousse 2015, 289). Again, Duflo may find fault with feminist epistemology given her desire for objectivity. The concept of objectivity should not be overly sought after according to feminist episteme, because it masks the relationships of power in research. (Ardovini-Brooker 2002, n.p). Despite Duflo's championing of the impartial researcher, feminist economists believe research should embrace the dynamics of leadership, sociohistorical contexts, and emotion in the process of doing the research.

A 2006 study highlights the importance of context in research. Duflo reports results from an RCT by Al Amana, the largest microfinance institution in Morocco. Researchers offered microloans to treatment villages and no loans were offered to control villages. The program failed; people in the villages accepted the microloans at very low rates. A follow-up qualitative study linked the failure to Al Amana's poorly designed calendar of repayment, modeled after urban needs without considering the agricultural calendar (Bernard et al. 2012, n.p). Since the repayment calendar didn't align with the agricultural calendar, a crucial factor in rural areas, people in the treatment group did not want the loans.

With this example, Duflo attempts to ask: "Does microcredit work to alleviate poverty?" However, without the consideration of historical context, and while trying to remain objective, the RCT's goal of isolating a causal relationship became more difficult in practice. Feminist economists argue that if Duflo's team had listened to the experiences of individuals in the villages, they may have known to adjust the repayment calendar to the agricultural calendar.

**Intersectional Feminism**

Feminist economists used the term intersectional feminism to support their argument that RCTs are not the optimal form of development research. In 1989, civil rights activist and professor Kimberlé Crenshaw coined the term "intersectionality," which acknowledges intersecting identity traits to understand how inequality and oppression affect people differently. Intersectional feminism first described the intersection between race and gender and the lived experiences of black women.

When applied to the field of development, the term intersectional feminism takes on an expanded meaning. Intersectional feminism allows research to explore how gender interacts with different individual identities, such as race, class, ethnicity, religion, (dis)ability, social norms, and education (Stein 2022, n.p). Proponents of intersectional feminism believe that taking the interactions of different identities into account can aid researchers in understanding how people's characteristics affect their needs. For example, the gender wage gap shows that women make 0.82 USD for every white man's dollar (Stein 2022, n.p). This statistic, however, only takes account of white women. Considering other races reveals that Indigenous American and Alaskan Native, Native Hawaiian and Pacific Islander, Black, and Hispanic women earn even less than other women.

Feminist economists claim that using an intersectional feminist lens to design development programs and interventions allows development professionals to treat the cause of inequality rather than the symptoms. Researchers can dismantle systems of inequality—effectively empowering women and subsequently encouraging economic development, according to Kabeer (2020, n.p). The intersectional feminist perspective claims that Duflo's RCTs do not take intersectional identities into account, and the method relies on numbers without context.

**A Decision for Economists**

When Duflo became the second woman in her field to win the Nobel Prize, she was soon well-known in both feminist and economic communities. She had transformed a methodology used in the medical field into a tool to study social issues. In doing so, she altered the way development experts conducted research to alleviate global poverty. Development transitioned away from theory-based research on the "big picture" economy and towards studying individual economic actors. Duflo's championing of RCTs affected law-making: policymakers would take the results from her RCTs and use the data to direct policy. Feminist economists, however, use a critical feminist lens to challenge the effectiveness of RCTs, especially in regard to the method's impact on gender equality. Critics like Kabeer claim the RCT method failed to incorporate qualitative and contextual analysis. They assert that the "objectivity" of the method would not lead to gender equality, as Duflo claimed. Feminist economists called for a more gender-focused approach to development policy—claiming that this would lead to gender equity *and* economic development.

So, are feminist economists right? Should economists use RCTs or more qualitative and contextual research to ignite change? Does the fate of gender equality rest in the ability of RCTs to achieve women's empowerment? No matter the answer, there is no doubt that Duflo left the field of economics forever changed.

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