**Transcending Microeconomics: Toward a Real-World Metaeconomics**

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**Abstract**

The need to go beyond Microeconomics (as applied in Neoclassical Economics) to a Metaeconomics --- the "Meta" meaning to transcend --- was first proposed in Lynne (1999) about the same time the Post-Autistic Economics Movement to transcend (toward what came to be called a Real-World Economics) was initiated in 2000. Metaeconomics (Lynne, 2020) grew out of a couple of realizations, based in behavioral and neuroscience. First, a Human (we had found in real farmers practicing conservation and in consumers who recycle) demonstrates a dual interest (self-interest and shared other-interest), in contrast to the Econ in Microeconomics having only self-interest. Second, the single interest (self-interest only) Econ tends to go to excess. The Econ is in effect operating in an illusion rather than in the reality of every person (and the economy) being embedded in the Spaceship Earth system, which also includes the community of all other Humans. So, there is a community of shared (other-) interest at play --- reflecting the ethical system, the moral dimension --- and essential to tempering the inherent excesses of the self-interest. Metaeconomics provides an analytical system highlighting the need for a Human to practice self-control in bringing the influence of the shared other-interest to bear in tempering the excesses of self-interest.

**Key words**: dual interest theory, ethics, metaeconomics, single interest theory, microeconomics

## I Introduction

A Reviewer of the first draft suggested the need to speak more directly to the general reader of Real-World Economics Review. It seemed, to the Reviewer, the paper was too oriented to someone teaching and/or studying Single Interest Theory (SIT) in Microeconomics. The first draft was focused on the details of Dual Interest Theory (DIT) in Metaeconomics (after Lynne, 2020).

So, in first speaking to a more general reader, what is the context that frames the paper, on the way to the DIT analytical system? And, if the general reader wishes, the DIT details in IV and V can be skipped, going directly to final sections VI-VIII.

## II Advanced Organizers and Conventions

Before going to that story, to help discourse here (and see Lynne, 2020, Chapter 3, for more), the MetaEcon (Metaeconomists) use DIT; the NeoClassEcon (Neoclassical Economists) use SIT; and the NeoInstiEcon (the Neoinstitutional Economists tracing back to the original Institutional Economists, not the NeoClassEcon disguised as NeoInstiEcon) along with the BehEcon (Behavioral, to include Experimental, Economists) are largely atheoretical. A MetaEcon also draws on other social sciences, like that produced by the SocPsych (Social Psychologists); the SocioEcon (Economic Sociologists); the EconPsych (Economic Psychologists); the EcolEcon (Ecological Economists); and the PolSci (Political Scientists). We also use the BehEcon Thaler and Sunstein (2021) notion of the Econ in SIT in contrast to the Human in DIT. The MetaEcon see the need to think in terms of the Econ&Human, integrating across constructs in

NeoClassEcon&NeoInstiEcon (see Table 2.1 in Lynne, 2020). The MetaEcon are on the path to find a theory that all can use, jointly, a kind of consilience theory. Also, the "&" works hard throughout the paper, seeing the elements on either side of it as joint, nonseparable, interdependent, and absolutely essential to each other.

## III Context Framed by the Original Contentions in the Post Autistic Economics Movement

The series of short papers in Fullbrook (2006b), organized in 10-Parts, are a good place to start. Each Part is expressing a concern over SIT in Microeconomics. I now turn to a DIT based MetaEcon perspective on each Part.

**Part 1, The nature of the enemy:** DIT does not see SIT as the enemy, but it does see severe limitations needing to be augmented and otherwise fixed. As Leijonhufvud (2004) said it, in framing what an intensive summer course in doing laboratory based experimental economics --- with findings that might be used to influence SIT --- was about: "Instead of looking for an alternative to replace it, we should try to imagine an economic theory to transcend its limitations…" DIT is such a theory. At the same time, the MetaEcon along with the NeoInstiEcon, have been quite critical of the NeoClassEcon, especially on the grounds that SIT is regularly used in making unfounded (little to no scientific credibility) ideological claims.

As NeoInstiEcon Bromley (2019, from the review in Lynne, 2021) says it: "(NeoClassEcon, SIT) Economics, it turns out, is just political ideology in disguise… (people) ought to behave as rational utility maximizers, and (economists) will show them exactly what they must do (maximize self-interest)… There is not a single concept of greater importance—and mischief—in economics than that of (self-interest only based) efficiency (and perhaps the most important matter) … scientific objectivity— the (supposed) ethical neutrality … economics (is) the study of the allocation of scarce means among competing ends. Such ends (involving ethics, which tempers efficiency) were beyond question … (so focus only on the means of the) … central figure … the consumer … (ignoring) the individual's embeddedness in a household with other loved ones, the individual's participation in the social aspects of a neighborhood, or in the civic activities of a political community … (all such things representing the shared other-interest, the shared ethic with other Humans, as DIT makes clear)."

**Part 2, The faux Nobel Prize:** PolSci Fukuyama (1992) proclaimed the *End of History* after the Berlin wall came down and the Soviet Union was dismantled. Classical liberalism based capitalism given context by liberal democracy had won the "ism-war," especially the Market Neoliberalism leading to globalism. China, too, was embracing capitalism, and Russia, along with all countries now free of the Soviet Union, were expected to follow. The "ism" formed, shaped, and touted by SIT had won. So, it does seem awarding a Nobel Prize for such a noble outcome is appropriate. Yet, it turns out the matter of which "ism" is best has yet to be resolved, especially made clear by the early-2022 Authoritarianism&Oligarchism&Religionism framed invasion of the fledgling Classical Liberalism --- Capitalism&Democracy --- based Ukraine. China, too, has turned away from the tenets of Classical Liberalism bringing Capitalism into play only enough to also form an Authoritarianism&Oligarchism. The tendency is even ongoing in the US, UK, and

other former bastions of Classical Liberalism, because it has massively failed (Deneen, 2018). The political chaos in the US is the symptom. Authoritarianism&Oligarchism (ever more mixed with Religionism) is always the next step, so the US seems right behind China and Russia.

Deneen (2018) clarifies why we have not yet found the best "ism" as DIT also makes clear. The problem is that classical liberalism --- leading to both progressive (mainly cultural) liberalism and conservative (mainly market, neo-) liberalism --- conceives each person "… as rights-bearing individuals who could fashion and pursue for themselves their own version of the good life. Opportunities for liberty were best afforded by a limited government devoted to 'securing rights,' along with a free-market economic system that gave space for individual initiative and ambition (Deneen, 2018, p. 1)." Sounds like SIT. Deneen then delivers the blow, in that while it was launched "… to foster greater equity, defend a pluralist tapestry of different cultures and beliefs, protect human dignity, and, of course, expand liberty, in practice generates titanic inequality, enforces uniformity and homogeneity, fosters material and spiritual degradation, and undermines freedom. Its success can be measured by its achievement of the opposite of what we have believed it would achieve… (resulting in) our political, social, economic, and moral crisis (Deneen, 2018, p. 4)." There it is, and awarding Noble Prizes that contribute to said failure, well, questionable.

The Nobel Prize in Economics needs to be awarded to the economists --- and likely said economists would be pluralistic --- who are actually helping bring the *End of History.* The Nobel Prize would be recognizing the evolution of something akin to DIT, which makes clear the best tweaks in classical liberalism in the direction of producing a truly humane capitalism given context by an inclusive democracy. And, if that is normative rather than positive, so be it.

**Part 3, Realism versus illusion:** The problem with the NeoClassEcon use of SIT has always been the lack of a solid empirical foundation, as made clear by the BehEcon. SIT has been built around the illusion of the Econ, the profit and utility maximizing person who is traveling like an isolated Robinson Crusoe around the Sun, without even concern for ensuring the Spaceship keeps running. So, reality-based testing of SIT is the issue. And, said testing, needs to be guided by the framing from Khalil (1998, p. 614), seeing the substantive testing ground for an alternative theory, like DIT, is "whether the proposed... is less burdened with empirical anomalies than alternative ones." Seems simple enough, so, the empirical anomalies --- and the zombie arguments like trickle down --- are the place to start, with SIT representing overwhelming numbers of same. It is time to stop *Arguing With Zombies* (Krugman, 2020), all of whom use SIT, and ask for the empirical support for the SIT contentions, which are largely illusion, replacing same with empirical reality.

**Part 4, Pluralism versus monism:** Perhaps the most succinct way to make sense of the need for pluralism comes from Sen (1977, p. 318), in commenting on the presumption of an Econ as in SIT: "Furthermore, between the claims of oneself and the claims of all lie the claims of a variety of groups --- for example, families, friends, local communities, peer groups, and economic and social classes." So, sure, the self-interest of the Econ is part of the story, the claims of oneself, which is the claim of a rational fool. The shared other-interest must be considered into order to be rational, and not a fool As Marglin (2008) makes clear, SIT not only ignores community --- in DIT, the shared other-interest --- but actually works to undermine it. The fact the Human is embedded within the community of shared other-interest with other people and the Spaceship system is the

reason for pluralism. And, an economic pluralism, like represented by the MetaEcon, calls for integrating across a myriad of social sciences like represented in the PolSci, EconPsych, EcolEcon, SocPsych, and SocioEcon to list a few. The Econ flying alone on the Spaceship is SIT monism.

**Part 5, Saving the planet from neoclassical economics:** On the matter of sustaining the Spaceship, through such things as soil and water conservation, SIT claims the Econ need only acknowledge an occasional externality, e.g., wildlife lost while growing corn, or downstream water pollution caused by industrial farming practices. And, said Econ must view the downstream problem from the lens of self-interest. Fixing it would have to be profitable, only made possible with converting public property into private property (so self-interest could prevail). As DIT makes clear, going completely to private property and self-interest, which SIT claims works to avert the *Tragedy of the Commons*, does anything but fix the problem (see Lynne et al., 2016, and Lynne, 2020, esp. Chapter 12). One awardee of the Noble Prize in Economics, PolSci Eleanor Ostrom, would agree.

In DIT, each Human (the entire economy) is embedded within said Spaceship system. Rather than billiard balls, reality is recognized in 1st and 2nd law thermodynamics --- we can't get rid of anything, just changing its' form, and, ultimately we reach a state of maximum entropy, energy is finite. So, Humans must join in empathy-with other travelers, as everything is internal, which sustainability science has also come to recognize (see Brown et al., 2019).

**Part 6, Case histories:** As a working water resource economist for over 4-decades, the case history that especially comes to mind is the NeoClassEcon fueled drive of Market (Neo)liberalism in the push to create private property in water use rights. The move in Chile was especially dramatic, with predictable failure: As Bauer (2004) says it: "Much of the debate about Chilean water markets... has been based more on theoretical or political beliefs…" than on the empirical reality. SIT is used to make claims that the "intervention" and "distortion" represented in Other (Community and Representative Government) Forums used by Humans to address the water question must be replaced with the supposed superior Water Market Forum. DIT based empirical reality suggests a water market works only if tempered sufficiently by the shared other-interest which nudges --- intervenes and distorts --- the system into reality. As DIT clarifies, value V representing the shared other-interest evolving in the Other Forums is not an intervention or distortion. Rather, value V serves to temper price P, and, in fact, gives a theoretical explanation for the origin of the price P that emerges in every Market: No centrally located "benevolent auctioneer" is needed, as the "stupid price-taker agents (Guerrien, 2006a, p. 296)" are actually not stupid, and actually are "price-making agents (Guerrien, 2006b, p. 344)." Indeed, said Human (not Econ) agents are quite capable of making price P through interacting in Other Forums to form empathy based value V. It is the value V that makes the price P.

**Part 7, Is anything worth keeping in microeconomics:** McCloskey (2006) is in some ways the key paper, pointing out that *Yes, there is something worth keeping in microeconomics.* McCloskey goes on to point toward the power of the simple models like supply and demand. Metaeconomics would add the power of simple models used to explain supply and demand, like shared other-interest isoquants and shared other-interest indifference curves. What is not worth keeping is the SIT presumption of independent and separable producers and consumers, each having single-

minded self-interest. DIT clarifies the interdependence (jointness, actually) and nonseparability within and among producers, within and among consumers, and across consumers and producers, each wired by evolution with dual interest.

Also, perhaps the most glaring oversight of SIT: While not mentioned in Fullbrook (2006b), SIT presumes pure capitalism. As Munger and Villarreal-Diaz (2019, p. 351, quoting Labeit 2009) point out, pure capitalism would have "no taxes, no price ceilings, no price floors, no public parks, no central banks, no wars of aggression, no immigration restrictions." In effect, there would be no public property, so, only private good and no public good. Now, that is ideology, and has little to do with science. A pluralism, as recognized in DIT, suggests the need to look for the best balance in private&public-property, private&public-good, while looking for the "ism" that works best. Pluralism points to the reality that attempts at operating at either extreme --- pure communism or pure capitalism --- have never worked, and never will work. The extremes are simply counter to the way Humans have evolved with ego&empathy, reptillian&mammalian, I&We, self&other-interest tendencies, as neuroeconomics is confirming (e.g., see Singer, 2009; for an overview see Lynne, 2020, Chapter 1).

**Part 8, Some big ideas:** Adam Smith would not be happy with SIT as applied by the NeoClassEcon, in the claim it is all about maximizing self-interest devoid of ethical (empathy as the starting point) reflection. Such a maximizing process assures economic inefficiency, political economic chaos without peace, and, unhappiness. It is not conducive to making a nation truly wealthy, which also requires sustaining the Spaceship. The current crisis of capitalism is the indicator, as coming out of analysis by the NeoInstiEcon (see Bromley, 2019; review by Lynne, 2021), building on PolSci Macpherson (1962). PolSci Deneen (2018; review by Lynne, 2022) even goes further, pointing to a serious failure in applying the main tenets of Classical (including Cultural and Market) Liberalism. Many other books and writers in recent years are also pointing to the failures revealed in crisis proportions, basically a crisis of self-interest driven by excessive greed, and the associated power (for an overview, see Lynne, 2020, esp. Chapter 15). In general, said kinds of concerns are really harkening back to what Adam Smith proposed: It is Humans who bring true wealth to a nation, not the Econs. Classical liberalism was about helping Humans, not Econs, make a better Spaceship traveling experience.

And, the biggest idea? Empathy based ethics forming a shared other-interest to temper the self-interest of each person, each Human, is the key.

**Part 9, Putting ethics into economics:** Adam Smith tried to teach us about the role of empathy (ethics) based other (shared)-interest. Adam Smith was not exclusively focused on ego based self-interest; ethics mattered, and without it, an economy could not be efficient. As Smith said it, in considering own-interest (notice he does not say self-interest) in *On the Nature and the Causes of the Wealth of Nations*:

> It is not from the benevolence of the butcher, the brewer, or the baker that we expect our dinner, ***but from their regard to their own interest***. We ***address ourselves***, not to their humanity but ***to their self-love*****,** and never talk to them of our own necessities but of their advantages (Smith, 1776/1789, loc 239-251)

And, then, clarifying what was meant by own-interest, in *The Theory of Moral Sentiments*, the own-interest required a tempering (humbling) of more primal self-love, the self-interest:

> Though it may be true, therefore, that every individual, in his own breast, naturally prefers himself to all mankind, yet he dares not look mankind in the face, and avow that he acts according to this principle. He feels that in this preference they can never go along with him, … If he would act so as that the impartial spectator may enter into the principles of his conduct, which is what of all things he has the greatest desire to do, he must, upon this, as upon all other occasions, ***humble the arrogance of his self-love, and bring it down to something which other men can go along with*** (Smith, 1759/1790, loc 1714-1727).

So, Real-World Economics is about humbling the arrogance of self-love --- tempering the self-interest --- with that which the other can go along with. The latter came out of the moral sentiments --- pondered in the station of the impartial spectator and in consort with others --- producing the ethical system arising out of empathy. Mindfulness based empathy was the starting point for consideration of the impartial spectator. Also, in DIT, the humbling of self-love, the tempering of self-interest is done with sufficient self-control (Adam Smith also wrote a great deal about the problem of self-command) in paying sufficient attention to the shared other-interest.

Own-interest is about bringing in the moral dimension within the ethical system into giving context to economic choice. It is essential to bring it back, as Etzioni (1988) makes clear. So, we can no longer be "…opposed to ethical reflection…" [McCloskey, 2019, p. 93, pointing especially to the Libertarian branch of the Chicago School of (Neoclassical) Economics who apply SIT, e.g., the Milton Friedman claim that firms have no social --- read ethical --- responsibility]. DIT brings ethics back to center stage in the empathy based other-interest.

**Part 10, Student voices:** Reading this part reminded me of Frank (2004; see review in Lynne, 2008) who pointed to how students inclined to believe in the self-interest only frame of SIT tended to major in the field of the NeoClassEcon. And, students who came with other framing in mind, well, by the time of graduation with economics and business degrees dominated by SIT, many became believers. Fortunately, the French students who started the movement toward Real-World Economics not only astutely saw, but had the courage to step forward to fix, the problem.

## IV Context Framed by the Historical Use of Indifference Curves and Isoquants as Key Components of the Analytical System

SIT is a powerful abstraction (as we know, questioned in the Real-World Economics frame) which is brought into view with the Figures of the Microeconomics textbook. The most famous is the "scissors" of supply and demand, as illustrated in Figure 1. Supposedly the image was first represented in Marshall (1890) *Principles of Economics,* reflecting simple intuition, based on real-world experience.

The plot thickens, however, when one works to explain the origins of supply and demand. And, what is the story? Well, everyone trained in SIT understands how the indifference curve in consumption gives rise to demand, and how the isoquant in production gives rise to supply (and,

to derived demand for inputs). Intriguingly, the first image of an indifference curve actually preceded that of the demand curve, accorded to Edgeworth (1881) in *Mathematic Psychics.* And, it was not until the 1930s that the isoquant gained wide use, with one of the early users being Ragnar Frisch (Lloyd, 2012, p. 643). Frisch (1965) is also the first to place two overlapping isoquants in the same space in order to represent jointness in production and supply.

And, why bring-up the history of said SIT constructs? Well, the reason is that DIT has a quite different indifference and isoquant curve system. DIT makes it clear that both supply and demand are not only about the self-interest of each person, the private good, but also are about the shared (with the other) interest represented in the larger community (including Spaceship systems), the public good. By including the public good, DIT sees that supply&demand in the Real-World Economy are joint and nonseparable rather than independent and separable as SIT presumes.

## V New Theory and Framing to Replace, or, At Least to Transcend Microeconomics

I now explore both DIT based production and consumption metaeconomics

### A. Firm and Production Metaeconomics: Other-Interest Isoquants

Bromley (2019) as InstituEcon makes the convincing case that perhaps the most important step on the way to solving the crisis of capitalism, which is caused by the excessive focus on self-interest leading to a possessive individualism (i.e., self-interest only at play), is to first fix the firm. The firm (farm firms included) needs to be reimagined: As Bromley (2019, p. 207) says it, the "… solution—economically and politically—is to bring capitalist firms into a joint obligation with the government in this essential task. The persistence of union-busting, desultory pay and fringe benefits, layoffs, plant closings, automation, and outsourced jobs to foreign countries ought to remind politicians—and capitalists—that radical solutions are always available if hope is too long delayed." The joint obligation means seeing the key role of balance in self&other-interest within a firm: Bring back all the shared other-interest considerations, as represented in loyalty, obligation, and commitment (including Spaceship sustainability). And, the radical solutions? Well, the rise of Authoritarianism&Oligarchism in the Western democracies, as already at play in places like China and Russia, is pointing to same.

The inspiration for what ultimately became DIT started with our finding that the SIT in Production Microeconomics failed in suggesting the essential variables to explain the real-world variation in farm firm level decisions on soil and water conservation. We would go into farming areas where farmers had similar land with the same access to the latest kinds of farm machinery, chemicals, seeds, and fertilizers, and, the same access to University based extension and education services on how to best apply same. We would still find tremendous variability in the extent to which soil and water conservation was being applied. Using SIT, the best we could do was to explain --- the reality, not the illusion of "as if" farmers behaved a certain way --- about 15-18 percent of the variation in farmer choices (Lynne, Shonkwiler, and Rola, 1988). Self-interest only based profit maximizing, even "as if" profit maximizing, did not explain what was going on. Something was clearly missing.

What saved that early effort was the fact that the PhD student (Leandro Rola) working with me on that project had a master's degree in rural sociology. So, he was intent, while we were designing the questionnaire, to include various measures of community influence. And, while Production Microeconomics has no placeholder for such variables, when we added same to the multiple regression equations, the explanatory power increased substantively. So, the seed was planted for the suspicion that it was not only about self-interest based profit maximization (again, including "as if" framing). Community, writ large to include the Spaceship system, had something to do with the economic decision to conserve soil and water. The suspicion put us on a 3-decade long search to find out what was really going on. The detailed story of that trek is documented in Lynne et al (2016), and Lynne (2020, Chapter 8): By the end of the trek (and testing continues), using DIT enhanced the explanatory power threefold over that of using SIT, especially revealed in the laboratory experiments (all summarized in Lynne, 2020, but see especially Czap et al., 2012; 2015). And, in a word, we found empathy.

The early stages of that trek involved considering the work of the first Nobel Prize winner in Economics, Ragnar Frisch, on the matter of jointness in production (Frisch, 1965, Chapters 14 and 15). The suspicion was that somehow a farmer was dealing with the self-interest related to producing an agricultural product and perhaps some kind of joint, shared interest with the community, including concern with the ecosystem, producing outcomes that others (including the farmer) valued and shared. And, while the jointness framework looked to be a good place to start, the example used in Frisch (1965) was the matter faced by a sheep rancher in producing two market products, wool and mutton. The jointness was represented by inserting a set of isoquants representing wool and another set representing mutton into the same production space, illustrating the jointness by the two overlapping sets. One could not produce wool without mutton. No matter what input combination of hay and grain a rancher chose to apply, the sheep would always "decide" within itself on the mix of the products. The rancher had very limited control over how the sheep allocated the inputs. It was nonallocable inputs that gave rise to jointness in the products.

In that framework, it was impossible to separate out the two products, which is always presumed in models of joint production in SIT, which presumes independence and complete control over allocable inputs. SIT cannot explain the reality that the sheep allocates the hay and grain, and the fact the inputs are nonallocable to the sheep rancher. SIT, writ large, also fails to see the jointness, nonallocable character of all inputs applied on the Spaceship, as the ecosystem (like the sheep) allocates inputs among the products. Everything is internal: Nothing is (except Sun energy) external. It is the jointness in the inputs which became the clue.

It took several years of exploring, both theoretically (lots of reading across an array of behavioral and social science literature) and empirically (lots of surveys, focus groups, and eventually laboratory based experimental economics testing), before we came to the analytical system suggested in Figure 2. The first full rendition of said figure is in Lynne et al. (2016), although even a mathematical rendition of it existed by the time of Lynne (2006b), the latter Mathematical Production Metaeconomics also in Appendix B in Lynne (2020).

Reflecting the original figures in Frisch (1965, Figures 14.b2 through 14.b4, pp. 272-274), and connecting to the 3-4 decades of empirical research I have been involved in to test DIT, think of

path 0G for corn and path 0M for downst. The downst represents reducing downstream effects from an industrial agriculture, like water pollution, or reducing the amount of carbon released to the Spaceship system, and/or perhaps producing more wildlife in the corn field. So, looking to Figure 2, every point in the space shows producing both corn and downst, jointly. The set of corn isoquants along path 0G are overlapping with the set of downst isoquants along 0M. Reason? Again, because the inputs --- d is industrial inputs and e is conservation inputs --- are nonallocable by the farmer as between the corn and the downst. The corn and downst are joint, nonseparable, and absolutely interdependent. Neither can be produced unless both are produced. And, in industrial corn production, using substantive amounts of chemicals and carbon fuels, there is always a shared other-interest in downst production.

Where is economic efficiency achieved? DIT points to some path 0Z, a path within the rational zone bounded by path 0G (SIT self-interest efficiency, focused mainly on corn) and path 0M (shared other-interest efficiency, focused mainly on downst), neither one of which will produce economic efficiency on its own. With downst, empathy-based sensitivity, only some path 0Z will produce economic efficiency; peace (less chaos within the political process over environmental quality); and, overall happiness for both the farmer and the community. The shared other-interest on path 0M must temper the self-interest of path 0G for efficiency, peace, and happiness. And, path 0Z depends on what the corn farmer values, value V, going beyond just price P in the markets.

How does one illustrate the value V question, and the role of price P relative to value V? Figure 3 is needed, with the possibility and relative value V curves in it. The frontier (production possibility V frontier) is derived by moving along some iso-resource line $R^0R^0$ in Figure 2 and tracing the possibilities frontier with the same name in Figure 3. And, while not illustrated, notice in moving from either axis in Figure 2 toward points A and C, that both products increase, so it is irrational to operate in said zones (so, we do not illustrate same in Figure 3). Both some corn and some downst is essential to not be irrational.

Notice that if both products were fully valued in markets, that the slope of value $V^0$ would represent relative prices P for the corn and downst. Point B would be chosen in Figure 3 which sends the signal back to Figure 2 to select point B on path 0Z. Said formulation is just a SIT illusion: In the Real-World Economy there never has been a price P revealed for downst, as downst is a public property, a public good, with only a value V.

In reality, the value of downst involves some non-value payoff (a priceless payoff), a $V_M$ for the farmer, like the payoff from working together with others downstream to ensure sustaining the Spaceship. And, in reality, the value $V_M$ would influence the level and reaction to the price P for corn. Perhaps some point closer to point C would be selected on a different path 0Z. The choice would now be influenced by the shared other-interest on path 0M, which may not be commensurable in value terms to what is produced on path 0G. That is, value V > price P, in general terms (i.e., incommensurable terms), causes the economically efficient point (now representing both value V --- priceless --- and price P representations of a Human value system) to be different from what the market would suggest, alone.

Notice, too, that different resource (capital budget to buy inputs) levels from Figure 2 will produce different possibility frontiers in Figure 3. Then, along with additional value V curves in Figure 3, it is possible to find efficiency path 0Z in Figure 3 which drives the efficiency path 0Z in Figure 2. Notice how value V coming out of Other Forums in effect drives (gives context for) priceP in the Market Forum.

It is now easy to make sense of the original issue of SIT, which relies exclusively on price P and self-interest considerations, and how it simply has insufficient power in explaining farmer soil and water conservation choices. The community is often reflecting a value V different from price P, and with some farmers paying different attention to it, the variation arises in the choice.

So, how about supply and demand? For purposes of illustration, think of the derived demand for the conservation input e at point A at the intersection of self-interest only $S_1D_1$ in the price P space of Figure 1. Now, if the farmer tempers the self-interest a bit in value V space, the new derived demand is $D_2$, with the move to buy more e at point C. As the move is made, however, the supply of e will likely shift to the right as more farmers buy the conservation inputs e, and suppliers also join into the value V. The new equilibrium will be at some B, driven substantively by value V shared across a spectrum of farmers, people downst, and suppliers of inputs. The jointness in self&other-interest with value V playing a key role in determining the price P, again, eliminates the SIT requirement of an auctioneer in a centralized economy setting the price that the farmer mindlessly responds to in considering what is really valuable. Farmers, downst, and input suppliers are empathizing and otherwise interacting. The value V may even come through the regulator process --- again, the Other Forums are not intervening and distorting price P but in fact are making for the best price P --- with mutually agreed to regulations on the best mix of industrial and conservation technologies.

### B. Household and Consumption Metaeconomics: Other-Interest Indifference Curves

Looking to households, the research on farm firms had also made it clear that farms have households, too, especially in the family farm. In fact, the earliest rendition of how dual interest might be at play in farm conservation choice was framed as a problem in dual utility, an I-utility and a We-utility in Lynne (1995). It is, I believe, the first time jointness in goods has been represented said way --- overlapping indifference curves for two goods --- so it added a new dimension to the Edgeworth (1881) indifference space. Adding the "We" is, in general, to add the public good, going beyond just the private good of the "I" on which Edgeworth (1881) focused attention. It is the nonallocable feature of goods that leads to jointness in the private&public, I&We, the self&other(shared with the other) aspects of goods.

It was posited that the farm household was making the decision by working out the tension between the I&We, the private&public-good. Lynne (1995) demonstrated that adding the We-utility related variables to an I-utility model improved statistical performance.

So, it was decided to test the proposition focusing directly on consumers in the matter of recycling behavior. Attention was put to a consumer faced with buying a mix of goods with varying degrees of recycle content. With more recycle content, it would be easier to recycle same, by also expressing the balance in I&We-utility in the initial purchase. Data was also collected on recycling

choices in general. The empirical support came back strong, and robust. Consumers were balancing a joint I&We-utility (Kalinowski et al., 2006; Lynne, 2006a; Lynne, 2020, Chapter 4, and Mathematical Consumption Metaeconomics in Appendix A). There is not only an I-utility but also a shared, community-oriented, public-utility, a We-utility. Recycling was about seeking a balance in I&We-utility, an own-utility, not just I-utility, balancing the payoffs from the nonallocable goods within the own-self.

A more general version eventually evolved, changing the focus on utility to interest. The framework is illustrated in Figure 4, which shows the SIT claim about one set of indifference curves around the self-interest path 0G. DIT posits another set of indifference curves --- overlapping with the self-interest set --- around the other-interest path 0M. The dual interests are joint in the goods d and e: One cannot consume good d with the payoff mainly in self-interest without some payoff in other-interest, too. Similarly, one cannot consume the mainly other-interest oriented good e without some payoff in self-interest. Jointness in nonallocable goods d and e shifts attention toward the own-interest path 0Z, with the Real-World Economic possibility of economic efficiency, peace, and, yes, happiness.

And, notice that sacrifice in both interests is necessary at every point on path 0Z: Altruism takes on new meaning, as sacrifice goes in both directions. DIT also posits that the other-interest is that which holds the moral dimension, the morals of the market --- actually, the morals giving context to the market. Concern with the morals of the market has seen a resurgence of interest given the extreme inequality that has emerged in the markets, driving the associated political chaos leading to authoritarianism and oligarchy (e.g., see Whyte, 2019). The other-interest arises out of empathy (ethics)-based considerations with the other. DIT suggests putting Figure 4 into an Edgeworth-Bowley box: More like reality, and, complexity, as each person also now seeks to find balance with the shared other-interest.

Also notice that while the slope of the $Y^0Y^0$ budget line, which is $p_e/p_d$, still influences choice, the point chosen depends upon how the consumer is thinking about the best balance in self&other-interest. In fact, all three points A, B, and C face the consumer as options, albeit an analyst using SIT sees only point A, with the consumer maximizing self-interest, based only on price P considerations. The plot thickens, however, if there is value V (empathy and ethics driven) beyond price P.

To make sense of how value V influences price P, we need another analytical device, which involves using Figure 5 along with Figure 4. The $Y^0Y^0$ frontier in Figure 5 is derived from moving along the budget line $Y^0Y^0$ in Figure 4. The value $V^0$ with slope $V_M/V_G$ in Figure 5 now represents the payoff for a consumer from satisfying the joint self&other-interest in various proportions. Also note that value V, in general, is not adequately represented in price P. Value V goes beyond what the market is saying about value. And, choosing point B in Figure 5 locates path 0Z in Figure 4, and puts the consumer at point B in Figure 4. So, value V is influencing how the consumer considers the price P, with some things being priceless as value V makes clear. Again, price-making agents are at work (as Guerrein, 2006b, p. 344, points out, it is essential to explain the source of price-making) in value V space to evolve and influence price P, and the response to price P, with no need for an auctioneer-type institution as in SIT.

Now, for an analyst using SIT, the value $V^0$ curve would have to be tangent at point A in Figure 5, represented by the horizontal line which says the value V ratio is $0/V_G$, i.e., SIT claims that all value V is adequately represented in price P. Now, we might suppose it is possible that satisfying the other-interest has no value, i.e. $V_M = 0$: Extreme greed would say as much. Only the price P matters. The same, on the other-interest side, would be said at point C: Only the other-interest matters, as $V_G = 0$. In the Real World Economy, however, it is more likely that both value $V_G$ and $V_M$ are greater than 0,, such as at B.

To further illustrate, we can take any two goods being considered by a consumer and enter them into Figure 4. A common example in standard, introductory Econ 101 is the matter of bread d and wine e, with a budget to buy bread and wine defined by $Y^0Y^0$.

An Econ 101 SIT analysis would see the only concern is the self-interest in Figure 4, again, with all value revealed in price P markets. Bread and wine are presumed to be strictly commodities, with no other nuanced value V associated with same, i.e., Figure 5 does not even exist, with every good a commodity with a price P. Said framing "… reduces all values to cash value (Whyte, 2019, p. 7)." In effect, it is presumed the morals of the market (a very selective and limited set) are represented in some set of other-interest curves lying identically underneath the set of self-interest curves: Self&other-interest are absolutely joint, arising directly in proportion to each other, a complete coupling. So, simply look at the price ratio, the $p_e/p_d$, and maximize self-interest at point A in Figure 4. And, it is deemed moral and good to do so, as all value V is represented in price P.

However, just what if drinking wine with friends enters into the picture, which is really a value V event (it is, in effect, almost priceless), not influenced strictly by the price of wine? In such a case, $V_M > 0$, and perhaps $V_G > 0$, too, as in it is more fun to both eat bread and drink wine with friends than alone? The morals influencing said market now differ, perhaps looking more like that along path 0M in Figure 4. With that scenario playing out, the consumer would perhaps be at some point B in Figure 5, leading to some point B in Figure 4, different from the one involving only price P. And, if drinking wine with friends is indeed priceless (maybe it is in a Christian celebration of communion), then the choice is point C.

And, as noted earlier, any pair of goods can be put into this analytical system (e.g., try scuba gear paid for with price P and coral reefs paid for with tax T reflecting value V). Also, dependent upon the two goods selected, it is essential to understand that the set of other-interest curves may well move around. For the case above, we posited that the wine good e had more other-interest associated with it than did the bread good d. It is also possible that the shared other-interest is more associated with the bread good d.

And, on supply and demand for wine, looking to Figure 1: Because of the influence of the shared other-interest in drinking wine together, we might expect to move beyond the SIT point at A on $S_1D_1$ toward point C as the shared other-interest in wine drinking leads to $D_2$. However, because suppliers also start to see the jointness in the mainly private good bread and the more public good wine, more suppliers enter the market (and stores locate the wine shelves closer to the bread shelves), such that the new supply curve $S_2$ leads to point B. The new equilibrium is at point B, and, again, the driving force are the shifts in value V space serving to drive the price P space,

involving consumers and friends, along with stores and suppliers. Price P does not come from the benevolent auctioneer, but from the interaction of real people in other forums evolving value V and giving context to the price P that evolves in the market forum. And, notice too, it is irrational to try consuming a private good without some public good, and vice versa, in areas outside of paths 0G and 0M.

DIT also suggests general equilibrium takes on new meaning. Addressing both private&public goods leads to reality, not the illusion in SIT based general equilibrium analysis.

## VI Applications: Solving Old Puzzles and Paradoxes

DIT gives substantive improvement in explanatory power.

A. Common paradoxes and puzzles easily resolved:
    1. Paradox of voting: Using SIT, one would usually not vote, but most people do vote. DIT clarifies that voting gives payoff mainly in the shared other-interest, with it always entailing sacrifice in the self-interest. DIT clarifies that a political interest is a shared other-interest (Lynne, 2020, Chapter 6). And, after Drutman (2020), the US needs at least 4-6 parties. DIT sees empathy politics evolving to form coalitions to temper the self-interest only in a 2-party system.
    2. Organ and blood donation: Arises on path 0Z with sacrifice in path 0G payoffs. The same is true for any kind of empathy-sympathy-compassion driven involvement (Lynne, 2020, p. 130). As Wilber (2006, p. 414) makes clear, donation is about internalizing the moral dimension, which DIT represents in the empathy (ethics) based other-interest.
    3. Soldier jumping on a grenade to save the platoon, or nurses and emergency room personnel dealing with Covid: Self-interest payoff is continually sacrificed, and goes to zero at the moment of death, while the payoff is in the shared other-interest, including a hero's funeral (Lynne, 2020, pp. 113, 130).
B. Financial crisis and crash of 2008: It was mainly about a flawed shared other-interest among a few people in the financial industry who were maximizing self-interest. The crash was driven by too little regard for the shared interest in a truly humane economy wherein everyone has a piece of the action (Lynne, 2020, Chapter 7).
C. Food and food security issues, and back to the farmer decision on soil and water conservation. The most effective policy is to provide financial incentives --- as SIT suggests, "incentives matter" --- and to nudge empathy, as DIT makes clear (Czap et al., 2016). It is also economically efficient to subsidize farmers through the Federal crop insurance program, and in general to spend tax T to support the US Department of Agriculture --- due to the interdependence of the farm&society in the case of food (Lynne, 2020, Chapter 8).
D. Economically efficient health care requires compassion, which is only possible with a good mix of private&public provision of compassion influenced care. Compassion arises on path 0M (mindful empathy is the starting point), and, it must be brought into health care 0Z (Lynne, Chapter 9) to achieve efficiency and happy healthy people. Trzeciak and Mazzarelli (2019) demonstrate the empirical support for the DIT claim.

E. Families become dysfunctional when each person is driven only by self-interest. The very idea of a functional family rests in the notion of a shared other-interest within the family. Spouses need to temper self-interest --- especially hedonistic sexual urges. Yet, the self-interest is still important, as in a: We needs a Me to Be, but without Me, there is no We. Also, families of all kinds --- including every variation within the LGBTQ range --- need to be approached with empathy (Lynne, 2020, Chapter 10).

F. Education needs good balance in private&public schools. Private only schooling is inherently inefficient, because it does not adequately serve the shared public interest in education. Public schools are essential in order to educate citizens not just consumers (Lynne, 2020, Chapter 11).

G. Natural resource ownership is efficient only with good balance in private and public property; private property only (or public property only) ensures economic inefficiency on either path 0G (or path 0M). Sorry, SIT framers: The Tragedy of the Commons is best solved with good balance in private&public-property (Lynne, 2020, Chapter 12).

H. Taxes (i.e., tax T) are essential to achieving economic efficiency. DIT clarifies that only path 0Z can lead to adequate provision of public goods like health care, roads, education, and safety nets which are all essential to the private good. Taxes are essential in order to achieve good balance in private&public-goods, like automobiles&public-roads, fishing-gear&public-lakes (Lynne, 2020, Chapter 13): Tax T is essential to achieving efficiency.

I. Income and wealth issues (Lynne, 2020, Chapter 14):
    1. Raising the minimum wage: It is about a shared interest based on that which everyone can go along with --- a decent living for everyone. Said living better ensures everyone is happier, more at peace (less resentment, less anger, less political chaos), and, yes, is essential to economic efficiency. And, said minimum wage must be funded by lowering pay and compensation at the top, which also makes the top happier.
    2. Trickle down: It does not work because people in control of the capital (and, in effect, the labor) see only self-sacrifice to own-self, and do not put a value V on shared interest with lower income people. DIT points to finding optimal inequality --- ensuring adequate incentives to make wealth while ensuring that the value V of every person is recognized with an adequate price P compensation package.
    3. Labor unions: Unions are one of the most effective ways to offset the tendency to excess by the owners and managers of the capital. Scandinavian economies see the value V of offsets to capital power by labor power (see Lakey, 2016): Unions are essential to achieving economic efficiency.

J. Placeholder for "isms" represented in the shared other-interest in DIT:
    1. Many "isms" have played in history along the spectrum of pure communism to pure capitalism, with variants flavored by authoritarianism and fascism along the way (Lynne, 2020, Chapter 5). DIT can be directly used to find the best "ism."
    2. SIT presumes only one "ism" represented in a rather perverse version of classical liberalism based pure capitalism which at best ensures a Scroogism. Said Scroogism naturally devolves into political economic chaos (as made clear in Bromley, 2019 and Deneen, 2018). DIT clarifies that Authoritarianism on the Right

always arises as the system moves through Scroogism toward a pure capitalism, ensuring *Another Road to Serfdom* (Kuran, 2018). DIT also clarifies that Authoritarianism on the Left arises in the move through *Socialism* toward pure communism, putting the system on the *Road to Serfdom* (Hayek, 1944). DIT clarifies the only way to avoid *Serfdom* is in a joint and balanced Scroogism&Socialism (Lynne, 2020, Chapter 15). It is a call to a post-liberalism, a call ever more prominent (e.g., Morgan, 2021). DIT sees the call is to temper the excesses of ego based self-interest giving rise to Scroogism (inherent in Neoliberalism) with the empathy (ethics) based other-interest represented in Socialism. The call is to bring empathy (ethics) into building a *Humane Capitalism*.

Each and every economic question addressed using SIT could be addressed with DIT, and, in my experience so far, always adds new insights. For more applications, see the Metaeconomics Blog.

## VII Looking Forward: Policy Implications

Fullbrook (2006a, p.20) points to how successive generations of economists have been brainwashed to believe in SIT by the NeoClassEcon teachers in the classrooms, leading to a biased kind of economic policy. Fullbrook (2006a, pp. 20-25) points to the policy implications arising from SIT. DIT suggests substantively different policy.

**Competition:** DIT clarifies competition is influenced by that which the other can go along with, as represented in value V space. So, DIT is really more about cooperation than it is about competition. Firms explore what is shared with other firms, and with consumers. Consumers explore what is shared with other consumers, and with the firms. All of said exploration goes on in Other Forums outside the Market Forum. Competition in the Market Forum (price P) has no meaning other than in the context of cooperation and process represented in the Community (value V), the Institution(s), within which the Market Forum is embedded.

**Freedom of choice:** Being free to choose now takes on both fact and ethical content, as one is only free to choose based on sufficient reason, and, it must be done mindfully, which means ethically, in consort with the other. It is not about choice by a Newtonian automata in a mechanism, but rather about mindful and conscious (visible hand, not invisible hand) reflection about what is best in shared community and best for a person embedded in same.

**Rational choice and rationality:** In DIT, rationality leads to some tempered path 0Z, clarifying it is not rational to maximize self-interest. Efficiency is not just about equating some ratio of marginal products or marginal utilities to a given (by the auctioneer) price ratio. So, DIT is not a determinate system within price P space. DIT sees value V space playing a substantive role in affecting efficiency.

**Individual or economic agent:** DIT sees an individual or economic agent only making sense in the context of said person being embedded in the larger community, Spaceship-wide, of shared other-interest. The cultural norms, social conventions, and institutions (including law) are reflected in the shared other-interest. So, tastes and preferences are formed in the mindful process of interacting in said community, in value V space, with both the invisible but more often the visible

hand at work. So, DIT suggests it is still possible to aggregate across individuals, with the precondition that each individual has tempered the self-interest with the same shared interest with the other (technically, aggregation occurs on path 0Z, not on path 0G like SIT presumes).

**Positive not normative:** DIT sees the normative dimension in value V space as a clear partner with the positive dimension in the SIT framed price P space. In fact, the normative value V space gives context to the positive price P space, with both influencing each other in dynamic feedback. Also, DIT has a placeholder for all manner of ethics based value judgements --- utilitarianism, pragmatism, whatever philosophical and/or political and/or religious "ism" one wishes to consider --- each "ism" giving different content to the shared other-interest. By incorporating the normative dimension, DIT shifts the focus to a volitional pragmatism based search for sufficient reason (again, see NeoInstiEcon Bromley, 2006; reviews in Lynne 2007, 2009). So, DIT is normative with due recognition for the positive, and poses the matter of utilitarian based market ideology and consumerism as an empirical question in the search for sufficient reason to use said "ism."

**Efficiency:** DIT efficiency is about balance across all the joint and nonseparable "&" spaces. It is impossible to achieve efficiency without considering payoff in the joint private&public domains. So, using the Fulbrook (2006a, p. 23) example, in DIT it matters greatly on how costs are reduced --- cutting pay, replacing workers with robots, investing in machine improvements --- in that all give different content to the shared other-interest, each giving a different best path 0Z. Cost-benefit analysis which is all about price P is replaced with multiple objective analysis which sees the play of value V.

**Economic growth:** DIT economic growth shifts attention from the wealth-only focus on GDP on path 0G to the balanced wealth&sentiments growth on path 0Z. Growth means enhancing efficiency, peace, and the happiness made possible from balancing across both dimensions. Growth is about homeostasis rather than imbalance, asymmetry, disproportion, and, perhaps most importantly, growth is about finding optimal inequality in income, wealth, and power.

**Sustainability:** DIT sustainability is consistent with many contentions in the Real-World Economics Review regarding sustainability, e.g., in Sekara (2017) and Norgaard (2021). Sekara (2017) sees the need for both an economics based in biophysical reality and a public economics. Norgaard (2021) calls for bringing reality and morality back into economics.

DIT recognizes thermodynamics as characterizing the key feature of biophysical reality, especially in denying any role of the notion of an externality: The economy is embedded within the Spaceship. DIT has a placeholder for the morality highlighted in Norgaard (2021): Empathy is the starting point on the way to the moral dimension giving content to the shared other-interest. And, as Norgaard (2021, p. 61) makes clear, often it is the legal structure that provides "…moral guidance." DIT represents the law in the shared other-interest at play in the background.

And, on public economics: DIT sees the jointness and nonseparability of the private&public economy. DIT provides a placeholder for the public goods, the public trust, and the public economy through the construct of the shared other-interest.

## VIII Final Thoughts

On anticipating a criticism here: Some Real-World Economics readers may not be pleased with the fact that DIT in Metaeconomics is still a broad abstraction. It uses similar analytical machinery to that of SIT in Microeconomics, including a Mathematical Metaeconomics. The difference is: The abstraction of DIT is supported in the real-world economic experience of Humans. And, the fact that the abstraction in SIT has had so much influence should not be ignored: The abstraction that is DIT has the potential to be even more influential. It has the potential to help escaping the Econocene, as Norgaard (2021, p. 3) refers to it, "reconnecting reality and morality writ large." Please join in applying and testing DIT in Metaeconomics in the move to a Real-World Economics.

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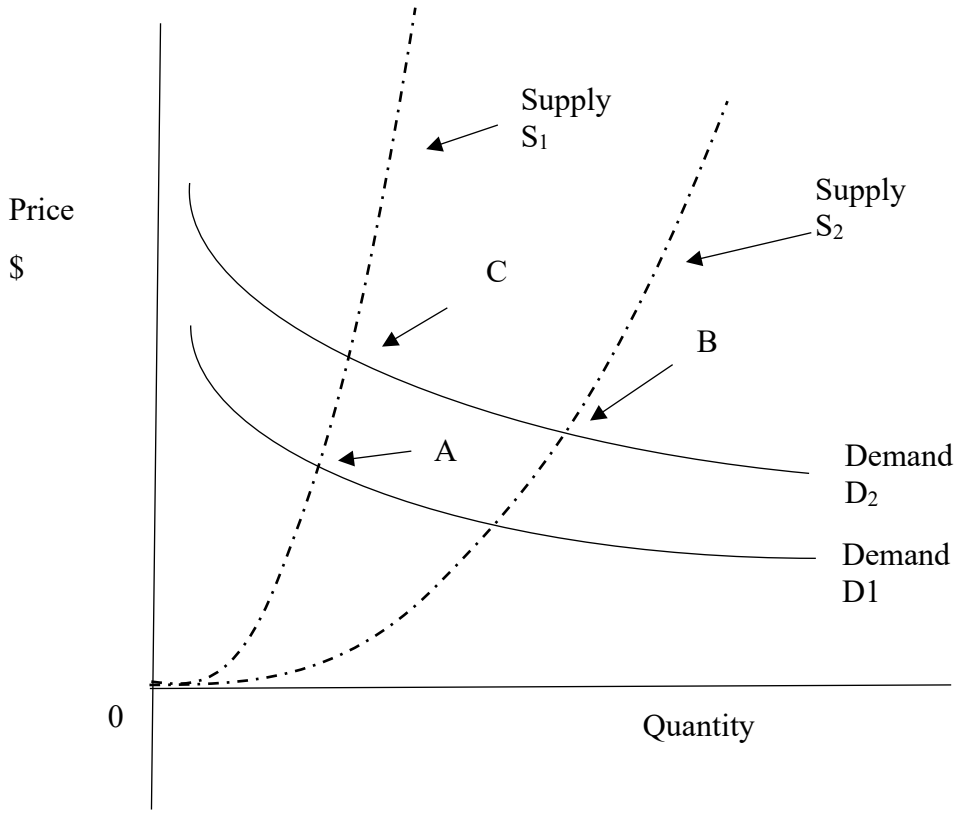
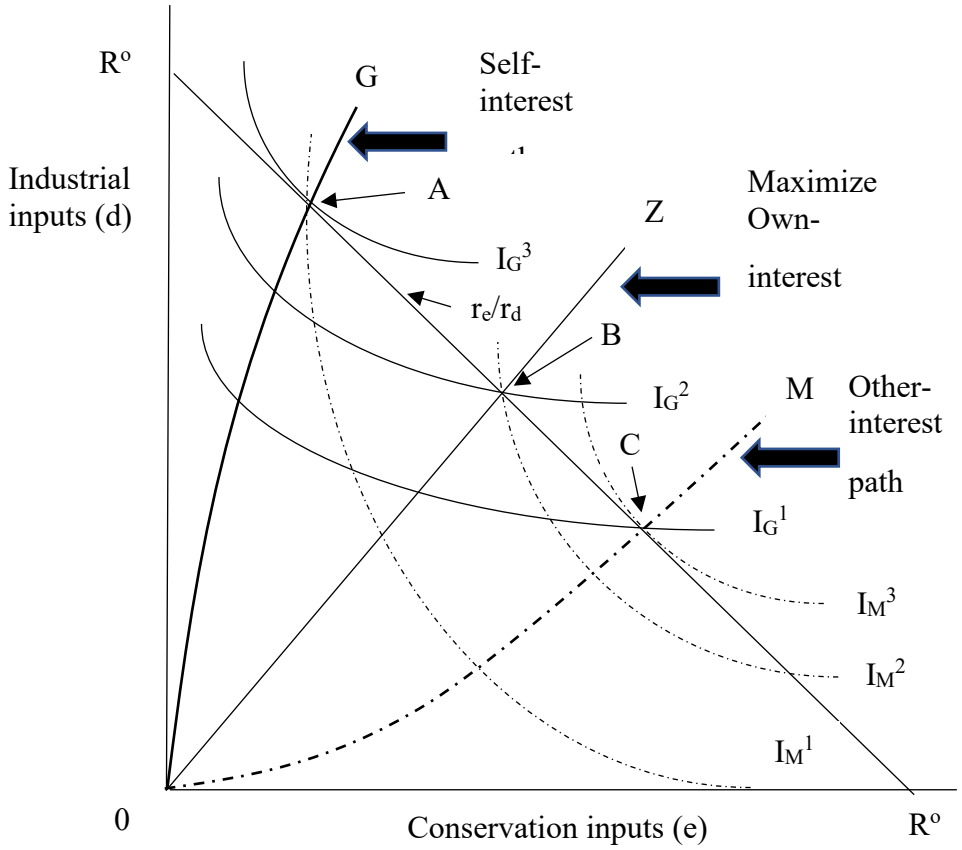
Figure 1. Supply (S) and Demand (D) influenced by the shared other-interest and reflecting the joint self&other-interest



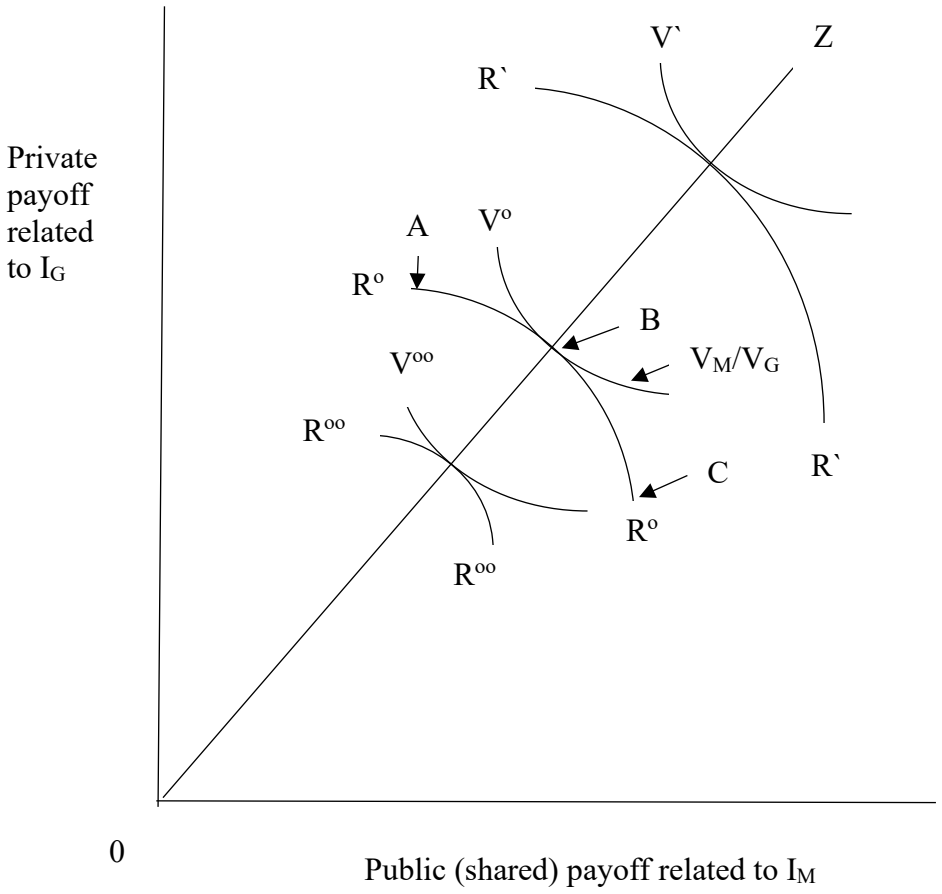

Source: Author original

Figure 2. Industrial inputs (d) joint (nonallocable) with conservation inputs (e) to produce a market product in the self-interest ($I_G$) and a downstream product in the other-interest ($I_M$)



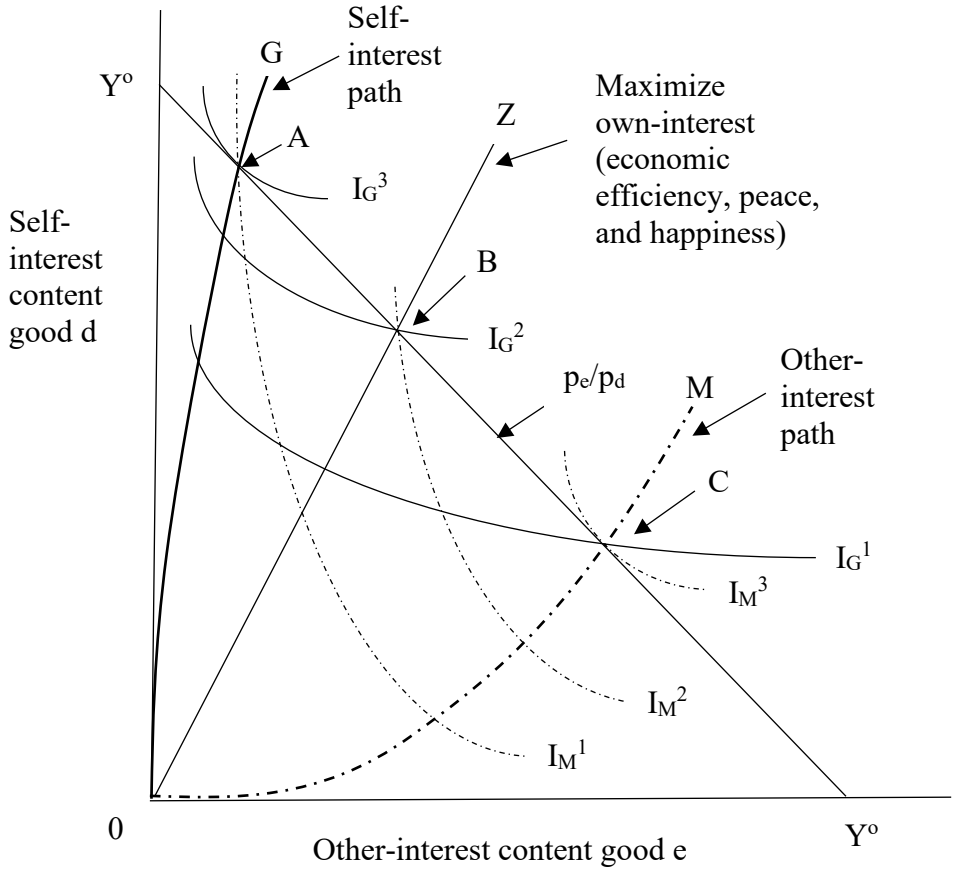

Source: Author original

Figure 3. Balancing the private interest with the public (shared) interest --- balancing self($I_G$)&other-interest($I_M$) --- in outcomes on a higher plane of value *V*



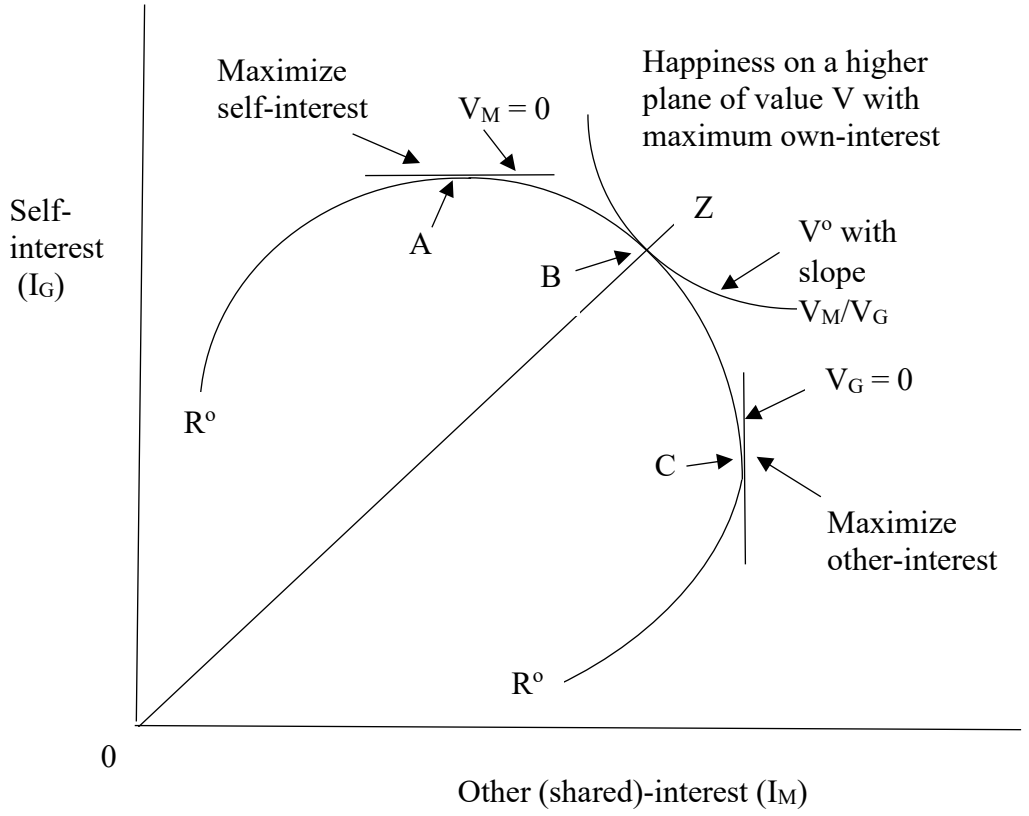

Source: Author original

Figure 4. Self ($I_G$)-interest and shared other($I_M$)-interest indifference curves for the allocation of a budget R between goods d and e




Source: Author original

Figure 5. Dual interest frontier representing balance in the joint pursuit of self($I_G$)&other ($I_M$)-interest in consuming good d and good e




Source: Author original