

Explaining Farmland Exchange Anomalies by Including Relational Goods¹

by

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Introduction

Farmland anomalies. An economic exchange anomaly occurs when the observed terms and level of trade and selection of trading partners in an economics goods exchange are inconsistent with the standard economic model predictions. These may include terms and level of trade and selection of trading partners that depend on relationships, unselfish exchanges where sellers sacrifice higher prices for lower ones, and choices that are irrational and inconsistent.

There are certain anomalies in the U.S. farmland markets. Compared to the arm's length market price, fifteen hundred farmland owner-operators in Illinois, Michigan, and Nebraska reported that minimum-sell prices to friends and family members were discounted by 5.57% and 6.78% receptively. These same owner-operators reported that they would require a minimum-sell price premium of 18.4% to sell their land to their unfriendly neighbors (Siles, et. al., 2000).

Another farmland market study found that strangers entering the Linn Country Oregon farmland market were at a decided disadvantage because they were forced to rely on public advertisements and realtors to access farmland sales information. Friendly neighbors and family of sellers accessed farmland purchase opportunities directly from the sellers. One consequence of

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this differential information access was that a stranger buying an 80-acre parcel of Class II nonirrigated farm land through a realtor was projected to pay \$2535 while a neighbor of the seller buying the same land was projected to pay 20% less (Perry and Robison, 2001).

Finally, as a result of premiums and discounts and preferential access to farmland markets that depend on relationships, farmland sellers reported that less than two percent of their sales were to unfriendly neighbors while up to 70 percent of land sales were to friendly neighbors and family. Others have reported similar observations in which relationships altered the terms and level of farmland trades. Indeed, terms and level of trade and selection of trading partners in farmland exchanges which are influenced by relationships are so common that those that exchanges that are not influenced by relationships have a special name: “arm’s length sales.”

Explanations of economic exchange anomalies. Behavioral economics is largely about observing and explaining economic exchange anomalies. The most common explanation of exchange anomalies is that the conditions imposed on economic decision makers by the assumptions underlying the standard economic model cannot be satisfied in practice. In particular, the standard economic model assumes that decision makers possess perfect knowledge about goods included in their choice set; that decision makers are perfectly selfish so that when making decisions, they are concerned only with the consequences of their choices on themselves; and, that decision makers possess the self-discipline necessary to execute decisions that are in their selfish interests.

Thaler and Mullainathan (2008) suggest all three assumptions underlying the economic model are routinely violated and account for “irrational” economic behavior. They note that: agents lack the resources required to gather and process the information required for perfectly informed choices; that agents routinely act in the interests of others; and that agents over eat,

over drink, and in other ways fail to execute sound decisions. Thaler and Sunstein (2008) describe decision shortcuts and limited rationality assumptions as alternatives to the assumptions imposed by the standard economic model.

Another explanation for irrational economic behavior is that our decision making processes occur within two conflicting cognitive systems (Kahneman and Frederick, 2002; Thaler and Sunstein, 2008; Thorgeirsson and Kawachi, 2013). Kahneman and Frederick suggest that “system one quickly proposes intuitive answers to judgment problems as they arise while system two monitors the quality of those proposals which it may endorse, correct, or override.” Thaler and Sunstein (2008: 23) suggest that behavioral bias may emerge when system two over or under adjusts in response to judgments made by system one. This interaction of the two cognitive processes may produce biased decisions which include overconfidence in the quality of one’s own decisions, excessive fear of risk, a preference for the status quo, and an overweighting of available information to name a few. The outcome of these biases in selecting one’s behavior has led to what some have labeled “embarrassing blunders” (Lockton, 2012).

To the explanations for exchange anomalies already presented, we add the following: traditional exchange theory often excludes from decision maker’s choice sets relational goods whose value depends on their connections to people producing, consuming, exchanging, and preserving them. In other words, the claim of this paper is that many exchange anomalies result from an omitted variable — relational goods. The purpose of this paper is to demonstrate that by including relational goods and an expanded set of motives in exchange analyses—we can explain many of the anomalies that appear in farmland exchanges.

What follows. In what follows we describe relational goods and the motives of those who produce, exchange, consume, and preserve them. Then we report on an empirical test of the

consistency between exchanges of commodities and relational goods and motives. Finally we explain how accounting for relational goods in exchanges, including farmland exchanges, can resolve many observed economic exchange anomalies.

Relational goods

Expanding the decision maker's choice set. For the most part, economic theory focuses on physical goods and services that decision makers obtain for themselves and whose values do not depend on their connection to a particular person(s). We call these goods, commodities. Describing this focus on commodities, Becchetti, Pelloni and Rossetti (2008) wrote: “in mainstream economics agents are mostly considered in isolation as they impersonally interact through markets, and consumption goods and leisure are assumed to be ‘sufficient statistics’ of their utility”.

Nothing in economic theory, however, prevents us from expanding the set of properties used to describe goods in decision makers' choice sets. For example, we could add the goods' relational properties to the description of those goods. Relational properties of goods include the identity of persons who produce, exchange, consume, and preserve goods in the choice set. Furthermore, this added description of goods could be justified if it were shown that decision makers' preference ordering depended on the relational properties of goods.

Social scientists in the past have connected a good's relational properties to its preference orderings (Bruni and Stanca, 2008). Veblen (1899) wrote that what we now call social capital is an “intangible asset” and discussed how it might influence consumption choices. Becker (1973, 1974a, 1974b) considered marriage, the spoiled kid, and discrimination. Easterlin (2005) pointed out the lack of a strong connection between people's income, and happiness. Bernheim and Stark (1988) acknowledged the importance of altruism and several authors connected

relationships and preference ordering under the general heading of social capital (Coleman, 1988; Portes, 1998; Putnam, 1995). Adam Smith may have foreshadowed the concept of relational goods when he described fellow-feeling or sympathy as essential for human happiness.

Emphasizing that identity of exchange partners matters when defining relational goods, Uhlaner (1989) wrote: “goods which arise in exchanges where anyone could anonymously supply one or both sides of the [exchange] are not relational”. Luigino and Stanca (2008) concluded in their review of relational goods that “genuineness is foundational, and the identity of the other person is essential for the value, and in some cases even for the existence, of the relational good. Gui and Sugden (2005) defined relational goods as “the affective components of interpersonal relations [that] are usually perceived as having value through their sincerity or genuineness”.

Defining relational goods. Relational goods are those whose value depends at least in part on their connections to people who produce, exchange, consume, and preserve them. Three concepts describe relational goods. The flow of relational goods is called socio-emotional goods (SEGs). The stock or inventory of SEGs is called attachment value goods (AVGs). SEGs embedded in persons are said to create investments in social capital (Robison and Flora, 2003). Finally, social capital is required to produce SEGs.

SEGs are intangible goods that satisfy socio-emotional needs. While there is no universally accepted list of socio-emotional needs relational goods are expected to satisfy, generally accepted needs include the need for internal validation or self-actualization, the need for external validation, the need for connectedness (belonging, love and friendship), and the need for knowing (Maslow, 1943; Lieberman, 2013). SEGs differ from other intangible goods and services because they are produced by social capital—sympathy (empathy), regard, or trust that

one person has for another person or group (Robison, Schmid and Siles, 2002).

SEGs like other intangible goods can become attached to, associated with, or embedded in durable goods and change the meaning and value of the durable goods they act on. Durable goods embedded with SEGs are called attachment value goods (AVGs) and represent a stock of SEGs. And because SEGs and AVGs “spring out of interpersonal relationships, and comprise the often intangible, interpersonal side of economic interactions” they qualify as relational goods (Robison and Ritchie, 2010).

In mainstream economics, the production of commodities employs manufactured capital (tools and implements), natural capital, human capital, and financial capital. All of these contribute to the creation of a good or service valued for its mostly observable physical properties. In contrast, relational goods are produced in sympathetic (empathetic), trusting, and high regard relationships referred to here and by others as social capital. While there are other definitions of social capital, many of these do not satisfy the requirement of being capital or social. Instead they focus on where social capital lives (networks), what it can produce (cooperation), the rules that organize its use (institutions) and how to produce it (Robison, Schmid and Siles, 2002).

Humanistic acts and the production of relational goods

Persons with social capital are capable of humanistic acts. This paper defines a humanistic act as one in which one’s social capital is employed to change the socio-emotional well-being of another person through the production and exchange of SEGs. Humanistic acts can be described by the socio-emotional needs they satisfy including the need for internal and external validation, the need for belonging, and the need for knowing. Consider some examples of humanistic acts.

Honorific acts. Honorific acts are humanistic acts that produce mostly external validating SEGs. Honorific acts that provide external validation include public recognition of a person's achievements. Such might be the case when persons are recognized by a credible source that identifies their behavior as noteworthy. In some cases, honorific acts that provide external validation recognize persons who satisfy well-known standards of performance such as meeting the requirements of a degree program or who complete tests in which outcomes are ranked and compared. Often honorific acts involve awarding objects embedded with SEGs, AVGs, than can be used to remember and represent to others one's honorific acts. Such AVGS include trophies, certificates, specially marked items that can be worn in public, and titles attached to one's name. Honorific acts may recognize one's efforts in a competitive environment in which winners and losers are declared. The value of these honorific acts are often increased through their public recognition via social media and word of mouth.

Anonymous giving. Anonymous giving is a humanistic act that produce mostly internal validating and belonging SEGs. Anonymous giving involves a commitment of resources to a cause, person(s), or institutions without making known the identity of the giver. Recipients of anonymous or private giving include persons in distressed circumstance, health facilities, nonprofit organizations, political parties and candidates, religions, and universities.

Acts of inclusion. Acts of inclusion are humanistic acts that produce mostly belonging SEGs. Acts of inclusion include acts of commitment, initiation, and invitation. Commitment acts that produce belonging SEGs include marriage ceremonies, pledges of allegiance, and voting that sustain officers. Initiation acts include proscribed ceremonies in which members of an established organization signal their acceptance on an initiate and the initiate signals his or her acceptance of the organization's culture and practices. Acts of invitation often preclude acts of

initiation. However, these may express a wide range of inclusion. For example, an invitation to lunch does not signal the same degree of inclusion as a proposal for marriage.

Symbol adoption acts. Symbol adoption acts are humanistic acts that create belonging SEGs. Wanting to enjoy the SEGs associated with belonging to an organization leads some to adopt the organization's symbols. For example, many university students wanting to enjoy the SEGs of belonging (such as being associated their schools winning sports team) leads some students to wear its colors, to learn its history, and to attend events associated with their school. Some who want to enjoy the SEGs of belonging to a church may read its literature, participate in its ceremonies, and contribute to its projects.

As a result of the need to provide symbol adoption acts, nearly all organization that offer belonging SEGs have their unique symbols. These are stocks of SEGs that convey connections between the person and the unit to which he or she now belongs. Such religious symbols include the Star of David, the Cross, and the Crescent. University mascots which signal the connections between persons and the university they represent include nearly all large animals, devils of different colors, ancient warriors, and symbols associated with Native American tribes and nations.

Kernel identification acts. A special category of humanistic acts designed to produce belonging and validating SEGs are knowing kernel identification acts. These acts are designed to identify common traits that can be used to establish a relationship based on shared experiences or views. Kernel identification acts often occur in getting acquainted conversations between persons in which they ask questions that search for commonalities such as where both persons have lived, what friends and acquaintance they have in common, shared educational experiences, and shared religious, political, and sporting views.

Some common kernel identification activities are formally organized in order to reduce the cost of finding shared kernels. For example, a concert may attract those with similar interests in music, providing those in attendance a sense of community. An organization meeting for intermural athletics may attract those with similar interests in sports. Other organizations that create belonging SEGs include book clubs, rock climbing clubs, chess clubs, and many others which all have the same purpose of helping persons satisfy their need for belonging by bringing together persons with shared traits and interests. Search efforts for persons with shared kernels have now been largely computerized. Shared kernels over which searches have occurred are one's shared religious faith, one's professional interests, one's taste in music, one's marital state, recreational pursuits, and one's body shape.

Information sharing acts. Humanistic acts that create knowing SEGs disseminate knowledge and information that validate and express belonging. One may be held in high esteem by others, but unless that information is shared, validating SEGs may never be created. Similarly, organization may desire new members, but unless the membership invitations are known, no belonging SEGs are created. So we define knowledge that satisfies one's socio-emotional need for validation and belonging as knowing SEGs.

One meaning of "knowing" as used here means to acquire an understanding of the feelings of sympathy or affinity one person has toward another place, person, or thing. For example, when someone says that they know another person, they are often suggesting a deeper knowledge than just observed physical facts that describe the person, place, or thing. They are conveying an emotional understanding of the person, what they value, what are the challenges they face, what are their aspiration all of which lead to a deeper level of empathy or social capital. Thus the formation of social capital rich relationship may often involve the acquisition of

knowing SEGs.

Anthropomorphizing inanimate objects. Anthropomorphizing acts are humanistic acts which embed SEGs in nonhuman objects. Anthropomorphized objects are then capable of delivering (mostly) belonging SEGs. In the movie *Cast Away* (2000), the character portrayed by Tom Hanks is alone on an uninhabited island for an extended period of time as a result of a plane crash. One item that washed ashore after the plane wreck was a Wilson soccer ball which Hanks called Wilson and who acquired human-like properties including someone who Hanks could talk to. Other anthropomorphizing examples include naming one's car, ascribing human emotions to stuffed animals or real ones, the tooth fairy and the Easter Bunny. Food vendors must exercise some care when anthropomorphizing animals that may later be consumed. (e.g. *Eat More Chikin*). Other examples of anthropomorphizing objects that the authors have observed include pitchers talking to their baseball and pet owners calling their pets their "children".

Vulnerability acts. Allowing oneself to be vulnerable to exploitation by others is a humanistic act that creates SEGs for others by communicating to them that they are trusted. Expressing trust by becoming vulnerable is designed to increase one's social capital or good will provided by others. Important retailers have adopted an unusual strategy for building social capital with their customers: trust them. Sending a signal to their customers that they are trustworthy is often achieved through "no questions asked" return policies. Another example from the streets of New York are sales of hot dogs in which the customer is trusted to pay for what he or she perceives to be the worth of the service and product.

Distinguishing properties of commodities and relational goods

Human needs are satisfied by commodities and relational goods. The distinguishing properties of commodities and relational goods are described next.

Distinguishing properties of commodities. The properties that describe commodities have little or no connection to people or relationships among people and are described next. (1) Commodities are exchanged in impersonalized markets. (2) The terms and level at which commodities are exchanged are determined by the aggregate of market participants and apply generally. (3) Commodities are standardized goods of uniform quality which makes them perfect substitutes for each other so that little or no connection exists between their value and those who produce, exchange, consume, and preserve them. (4) The value of commodities can be inferred from their (mostly) observable properties. (5) Manufactured, natural, human, and financial capital may all play an important role in the production of commodities. (6) The value of commodities can be altered by changing their form, function, location, or other physical properties. (7) Commodities satisfy mostly physical needs and wants. (8) Commodities are mostly nondurable goods not likely to become embedded with SEGs because of their short useful lives. (9) Commodities are most likely to have their quantity and quality certified by arm's length agencies established for that purpose.

Distinguishing properties of relational goods. The properties that describe relational goods are wholly or partially dependent on the good's connection to people who produce, exchange, consume, and preserve them and are described next. (1) Relational goods are exchanged in personalized settings in which either the buyer or the seller or both are known to each other. (2) The terms and level of relational goods exchanged are influenced by the social capital inherent in relationships of those producing, exchanging, consuming, and preserving them. (3) Relational goods are poor substitutes for each other because they produced in unique

relational settings. (4) The value of relational goods depend on their mostly unobservable intangible properties. (5) While other forms of capital may be used in their production, relational goods cannot be produced without social capital. (6) The value of relational goods can be altered by changing their connections to people who produce, exchange, consume, or preserve them. (7) Relational goods satisfy mostly socio-emotional needs and wants. (8) Relational goods are mostly durable goods likely to become embedded with SEGs because of their extended useful lives. (9) Relational goods are not likely to have their quantity or quality value certified by arm's length agencies established for that purpose.

We summarize the differences between commodities and relational goods in Table 1.

Table 1. Properties of commodities and relational goods.		
Property	Commodities	Relational goods
1. Exchange setting.	Impersonal setting in which buyer and seller are not known to each other..	Personalized setting in which buyer and seller are connected through a social relationship.
2. How terms and level are exchange are determined.	Terms and level of goods exchanged are determined by the aggregate influence of market participants.	Terms and level of goods exchanged are uniquely determined by the social capital inherent in the persons engaged in the exchange.
3. Substitutability of goods.	Standardized goods with uniform quality which allows one commodity to substitute for another.	Unique with few substitutes because its value is uniquely determined by the social capital involved in its exchange.
4. Value determining properties.	Mostly observable, physical properties.	Mostly unobservable intangible SEGs exchanged directly or embedded in an AVG produced in part by the employment of social capital..
5. Capital used in their production.	Manufactured, natural, human, and financial capital may all be important in the production of commodities.	While other forms of capital may be used, social capital is required in the production of relational goods.
6. How the value of the good is changed.	Value is altered by changing the physical properties of the good including its form, function, location, taste, color, and other physical properties.	Value is altered by humanistic acts that produce SEGs which may lead to increased investments in social capital or which may become embedded objects creating AVGs.
7. Needs satisfied.	Mostly physical	Mostly socio-emotional
8. Durability.	Mostly nondurable or used infrequently.	Mostly durable or if nondurable, used frequently.

9. Certification.	Arm's length agencies empowered with regulatory and inspection duties.	Within the relationships associated with the good's production, consumption, or exchange.
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Two setting for exchanging relational goods

Relational goods can be exchanged in two types of exchanges. In the first type of exchange, the focus is on the relationships and what are exchanged are mostly SEGs. In the second type of exchange, the focus is on what is exchanged which almost always are AVGs, representing stocks of SEGs.

Exchanges focused on relationships. In relationship focused exchanges, SEGs are exchanged directly between persons in social capital rich relationships and require no object besides the persons involved in the exchange to complete the transaction. For example, two persons with strong feelings of affection for each other may express those feeling (SEGs) in any number of settings including meals, cultural events, conferences, religious gatherings, or work settings. And if there is an object exchanged, it is incidental to the exchange of SEGs.

Exchanges focused on objects. In an object focused exchanges, what is exchanged is an AVG, an object embedded with SEGs. AVGs results from prior or anticipated connections between social capital rich persons in which SEGs are produced and embedded in objects. AVGs are most likely a durable. However, AVGs may sometimes be nondurables that are often exchanged repeatedly such as a meal prepared to celebrate special occasion or a song or dance performed to mark milestones.

Motives associated with exchanges of commodities and relational goods

To be relevant, decision makers must view relational goods as capable of satisfying important socio-emotional needs. Therefore, to test the relevance of relational goods, we must identify commodities and relational goods acquired. Then we must the relative importance of

motives identified by the needs they are expected to satisfy. Our physical and socio-emotional needs and wants and their connections to motives are summarized next.

Own consumption motive. Our need for physical goods and services motivate us to find ways to maintain and increase our own consumption of commodities now and in the future. We call this motive the “own consumption” motive which corresponds to the selfishness of preference motive that underlies much of neoclassical economic theory. This motive may explain why we sometimes sacrifice leisure for work, sell our blood as opposed to donating it, never wash rental cars, shop for bargains, insulate our homes, and drive some distance to purchase gasoline at the lowest available price.

Self-respect motive. Our need for internal validation motivates us to act in harmony with our ideal self, our conscience, or what Frank (2008) calls our moral emotions. We call this the “self-respect” motive. This motive may explain why we return lost wallets, don’t take advantage of others even when we have opportunities to do so, make anonymous contributions, and keep the rules and our promises even when they can’t be enforced.

Good-will motive. Our need for external validation motivates us to act in ways that win the good-will and approval of important others. We call this motive the “good-will” motive. This motive may explain why we sometimes “dress for success”, attempt to impress the boss, make ourselves vulnerable, and buy presents on special occasions for people whose good-will we value, perform service when asked, and praise the success of others.

Belonging motive. Our need for connectedness motivates us to change our feelings of empathy toward other people, causes, and organizations, especially when we lack the ability or resources to change the empathetic feelings and attitudes others have toward us. We call this

motive the “belonging” motive. This motive may explain why we join clubs, volunteer, wear school colors at home games, or contribute to public radio.

Sharing motive. Our empathy (social capital) provides us a sense of belonging or at-onement with some others. These empathetic feelings internalize the well-being of those who are the objects of our empathy and sympathy and, may motivate us to share our resources with them, especially when their endowment of commodities is less than our own. We call this motive the “sharing” motive”. The sharing motive may explain why some soldiers risk their lives to rescue their comrades and why others donate blood, raise children, volunteer at relief centers, and make donations to charities. The sharing motive may also explain why we stop at traffic accidents and offer help. It is the subject of religious sermons which encourage us to respond to “the better angels of our nature” (Lincoln 1861).

We distinguish between the own consumption motive and the self-respect, good will, belonging, and sharing motive. The latter four motives we refer to as social capital motives because they refer to the several ways that social capital is connected to the production of relational goods.

Researchers conducted surveys and experiments to measure the relative importance of the own consumption and social capital motives. In this effort, subjects were provided commodities which they could keep or exchange for relational goods. It was hypothesized that subjects would keep most of the commodities they were allocated to increase their own consumption. This hypothesis was rejected (Robison et al., 2012).

Examples of a commodity, a mixed good, and two relational goods

In a study with colleagues, we used properties of commodities and relational goods discussed earlier to identify one commodity, one mixed good, and two relational goods (Robison

et.al., 2016a). Then we measured the relative importance of own consumption and social capital motives when they were exchanged for other commodities. We measured the relative importance of motives using commodities sacrificed (money, wages sacrificed, travel costs, and waiting time) because they can be more easily measured and compared permitting us later on to examine the connections between motives and commodities exchanged.

The specific commodity and relational good exchanges are described next. First, we examined exchanging one commodity for another commodity—money for gasoline. Second, we examined exchanging one commodity for a mixed good—money for a haircut. And third, we considered two cases in which commodities were exchanged for relational goods— money, wages sacrificed, travel costs, and waiting time for recycling and voting experiences. Finally, we acknowledge that it may be difficult to find a pure archetype exchange because most exchanges involve some relational goods and commodities.

Buying gasoline. Gasoline is a commodity. It is exchanged in an arm's length market with little or no connections between those who produce, exchange, consume, or preserve it. It is not unique. It is a nondurable and is subject to quantity and quality control by independent agencies. It is produced using manufactured, natural, human, and financial capital. It is a physical good valued for its capacity to provide (physical) transportation services. Finally, in most cases there is no personal exchanges between those engaged in the purchase of gasoline—just the consumer and a pump shrouded in metal. As a result of the commodity properties of gasoline purchases, we assumed that most consumers are likely to consider gasoline purchased from different stations to be more or less perfect substitutes. The motive for buying gasoline, a commodity, is the own consumption motive.

There is, however, the potential for relational goods to be exchanged with the purchase of gasoline. Consumers might choose a specific gasoline station because they like the brand – believing that it is “better” gas, has more beneficial additives, or has a better environmental record. Likewise, it is possible that an individual might choose to buy from a specific station to support a local business or because they like the people that work there. However, the prevalence of pay-at-the-pump technology (90% of customers in 2011 used the technology) suggest that the importance of social capital motives are likely to be small (Hamaker, 2011).

We summarize conditions that identify purchasing gasoline as mostly a commodity in column 2 of Table 2.

Properties	Purchasing gasoline Purchase	Purchasing a haircut	Recycling	Voting
1. Exchange setting.	Impersonal. Mostly commodity.	Depends on relationship between customer and barber. Both commodity and relational good	Mostly relational good.	Mostly relational good
2. How terms and level of exchange are determined	Market determined. Mostly commodity	Amount of tip is personalized. Prices may be standard. Both commodity and relational good.	Mostly relational good.	Mostly relational good
3. Substitutability of goods.	Near perfect substitutes exist. Mostly commodity	One barber is not a perfect substitute for another. Depends on customer preference. Mostly relational good.	Mostly relational good.	Mostly relational good
4. What determines the value of the good	Depends mostly on physical properties. Mostly	Depends mostly on physical properties. Mostly commodity.	Mostly relational good.	Mostly relational good

	commodity.			
5. Capital used in the productions of the good.	Mostly manufactured, natural, human, and financial capital.	Combination of manufactured, natural, human, financial capital and social capital	Combination of manufactured, natural, human, financial capital and social capital	Combination of manufactured, natural, human, financial capital and social capital
6. How the value of the good is changed	Impersonal market forces. Mostly commodity.	Depends on exchange of SEGs during the haircut and the quality of the haircut. Both commodity and relational good.	Mostly relational good.	Mostly relational good
7. Needs satisfied	Mostly physical transportation needs. Mostly commodity.	Physical needs are met. Exchange between barber and customer determines is SEGs are exchanged. Both commodity and relational good	Mostly relational goods but could include the need to dispose of commodities.	Mostly relational good. May have some cost savings related to trash removal.
8. Durability	Not durable. Mostly commodity.	Some of both Mostly relational good because the need for the service is repeated	Mostly relational good, not a durable but is frequently repeated.	Mostly relational good but is an exchange frequently repeated.
9. Certification	Externally regulated. Mostly commodity.	Customer is most often the one certifying the quality of the service. Mostly relational good.	Mostly relational good. But some external enforcement of trash removal.	Mostly relational good. But some external enforcement where voting is required.

Buying a haircut. A haircut has both commodity and relational good properties. First, receiving and delivering haircutting services is a personalized transaction that delivers a slightly durable good and the transaction is frequently repeated. Furthermore, because there is some extended contact between the person providing and the person receiving the service, it is likely there will be some exchange of SEGs in which social capital can develop. However, the

relationship between the barber and customer will determine the significance of the SEGs exchanged. In most barber shops, the terms and level of trade are standard but often allow for tipping that personalizes the terms of exchange. In addition, some barbers, depending on the social capital that exists between them and their customers, may provide special services not afforded casual customers which may make the conditions and terms of the exchange unique. And in some high end establishments, each barber establishes his or her own fees. Combinations of manufactured, natural, human, financial, and social capital is used to produce a haircut.

Considering the properties that distinguish between commodities and relational goods and their exchanges—a haircut is somewhere in between a commodity and a relational good. Column 3 of Table 2 summarizes the commodity and relational good properties of a haircut. The motives for buying a haircut were expected to be mix of social capital motives and the own consumption motive.

Recycling: Recycling is mostly an exchange of commodities (time, travel costs, foregone earnings, etc.) for relational goods embedded in the recycling experience. Instead of simply disposing into trash, recyclers spend additional time and effort and incur other costs (e.g. buying recycling bins and transporting to drop off recycling centers) to recycle, most often with relatively little or no expectation of monetary returns. What recyclers do receive from recycling are relational goods that depend on the social capital of those approving of and supporting the recycling efforts, including one's self-respect. The exchange of commodities for recycling efforts is mostly conducted in an individualized setting where the conditions of the exchange are personally determined. For example, one may recycle anonymously by dropping off recyclables in public recycling stations at night. Alternatively, one may recycle in social setting observed by others. Most forms of capital, including social capital with one's ideal self, are used when

individuals recycle. The relational goods earned during recycling experience depend on other persons being aware of and approving of one's efforts, and one's own feelings of contributing to the well-being of others and the environment.

There may be some commodity benefits from recycling such as deposits from some beverage containers or having one's trash removed—but trash removal services are mostly available at lower commodity expenditures through regular trash removal services. No agency monitors or regulates exchange conditions associated with recycling, except perhaps to limit the types of goods that can or cannot be recycled. Column 4 of Table 2 identifies the essentially relational good properties associated with recycling. The motives for recycling are expected to be mostly social capital focused including the self-respect, sharing and goodwill motives depending on the balance between the needs for internal versus external validation.

Voting. Voting is mostly an exchange of commodities (time, travel costs, foregone earnings, etc.) for relational goods embedded in the voting process. In terms of voting properties, they mostly match those of a relational good. Voting is conducted in one's own personal space. The terms are not standard, everyone is allowed the opportunity to cast their own unique vote. Some forms of capital are employed, but mostly social capital. The voting activity is a nondurable event and no outside agency scrutinizes one's vote—at least not in free elections. And if the elections are not free, commodity motives may be important. However, the primary motives assumed to produce voting were self-respect (doing the right thing), good will (people will approve of my taking the time to vote), and belonging (voting helps me feel included in an important public process).

An empirical test: survey details

In an earlier study, researcher rejected the hypothesis that individual are 95% selfish or 95% focused on own consumption. A more recent study (Robison et. al., 2016a) asked: do the relative importance of motives depend on the type of good being exchanged—commodities, mixed goods, or relational goods? In other words, we wondered if an individual’s motive profile was affected by the nature of the exchange.

To answer the question posed above, we surveyed over 1000 subjects online using Amazon Mechanical Turk (MTurk). Incomplete responses were excluded from the survey data, resulting in a dataset of 990 responses. In the survey we created “Human Intelligence Tasks” (HITs) which could be accessed by MTurk workers through an electronic link. Upon completion of the survey, MTurk workers were given a code which they entered into the MTurk survey and were then paid for participating in the survey. The survey was developed by the authors and hosted by FluidSurveys.com. The questions were randomly displayed so that each respondent faced a different ordering of the motive questions.

Evidence of Mechanical Turk’s reliability. The use of MTurk provided an inexpensive but reliable means of collecting complex data from a number of participants quickly. As noted by Mason and Suri (2012) MTurk provides easy access to a large, stable, and diverse subject pool, and is a valid means of collecting data. They point out several studies in which MTurk results were comparable in quality to results provided by experts in those studies. They cite additional studies in which the MTurk results were qualitatively identical to results from subjects recruited using other methods, including classroom, laboratory and other online methods.

Supporting the reliability of MTurk in our study was the internal consistency in responses to the survey. Although the subjects were presented with the same five motives (randomly ordered) four times in different sections of the survey, their responses on each set of motives

questions was different from their responses in the other sections of the survey in a consistent manner from subject to subject. Moreover, the responses in this survey were consistent with responses in other surveys conducted by the authors that relied on other methods for collecting data.

Description of surveys. The survey began with an information and consent statement describing the purpose of the survey, how the information would be used, and a contact where they could obtain additional information about the survey. Respondents expressed their agreement to the conditions of the survey by pressing the “Continue” button. The next four sections asked questions about motives and terms of trade when buying gasoline, buying a haircut, recycling, and voting. The last section of the survey asked for background information about the MTurk workers: gender, age, ethnic background, education level achieved, employment status, financial status, family structure, residence status, and membership in organizations.

To examine the connections between motives and the types of good exchanged, MTurk workers were asked to allocate 100 percentage points among the five motives when buying gasoline, buying a haircut, recycling, and voting. They could allocate any amount of the 100 percentage points to a particular motive but the amount allocated for all motives was required to sum to 100. This method of measuring the relative importance of motives made interpersonal comparisons of motives valid by avoiding the interpersonal comparison problems inherent in Likert scale measures.

In prior and similar surveys, participants sometimes had difficulty translating their reasons for doing things into own consumption and social capital motives. For example, in an open response question, when given an opportunity to provide a reason for their participation in

an activity, respondents would invariably provide a reason that would fit within one or more of the five motives. Consequently, in this survey we provided reasons why a person might select a motive described in the survey. Some reasons for engaging in the four activities consistent with the five motives are shown in Table 3 below.

Table 3. Motives/Reasons associated with buying gasoline, buying a haircut, recycling, and voting.				
	Buying Gasoline	Buying a Haircut	Recycling	Voting
Own Consumption	To save money or time (for example, if you try to find the lowest price, if you shop at the most convenient location, or if you gain rewards points.)	I get a haircut at a place where I will save money or time - for example. I try to find the lowest price, the most convenient location, or the best value.	To make money or reduce expenses (for example, you recycle aluminum cans to earn money or to reduce waste disposal costs).	I vote to increase my income or reduce my expenses (for example, I vote because there is a potential economic benefit, such as reducing taxes or increasing government benefits).
Goodwill	I purchase gasoline where I want my friends and colleagues to see and notice me.	I get my haircut at a place where I want my friends or co-workers to see me since it improves my image or standing among them.	I recycle because of peer expectations or so that my friends and co-workers will think more highly of me.	I vote so that my friends and co-workers will think better of me.
Self-respect	To increase my self-respect by purchasing from socially or environmentally responsible companies.	I get my haircut at a given place because I feel I should; it makes me feel good about myself (for example, because of the quality of the haircut or the way I'm treated by the barber or hairdresser).	I recycle because I think it is the right thing to do and I feel better about myself when I do.	I vote because I think it is the right thing to do and I feel better about myself when I do.
Belonging	I purchase gasoline where I am more likely to run into and	I get my haircut at a place where I am more likely to	I recycle because it makes me feel	I vote because it makes me feel like I am participating in

	talk to my friends and colleagues.	encounter my friends and co-workers or where I will feel part of a larger community.	like a part of a larger recycling community or effort.	something larger than myself - it makes me feel like I am part of a community.
Sharing	To support the workers and owners associated with the gas station or gas company.	I get my haircut at a given place to support the barber or hairdresser, or the company they work for.	I recycle because I want to leave the environment in better shape for the people I care about (e.g., friends, children, grandchildren, etc.).	I vote to support people and causes that I care about, so that those people and causes may be more successful.

The relative importance of motives in exchanges of commodities and relational goods

Relative importance of motives and the type of exchange. How MTurk workers described their motives for buying gasoline, buying a haircut, recycling, and voting are summarized in Table 4. Each section of Table 4 provides the average percentage weight of the motives in each of the four activities.

One motive dominates the explanation for buying gasoline: the own consumption motive equal to 87%. The next important motives when buying gasoline were the sharing motive – which in this case means choosing a gas station in order to support the workers or owners, and the self-respect motive which indicates choosing a brand that is socially or environmentally responsible. However, neither of these motives (belonging and goodwill) had means greater than 6% of allocable points.

When buying a haircut, the own consumption motive drops to a mean of 47% (as compared to 87% for gasoline), suggesting that social capital motives are more important in the purchase of a haircut than when buying gasoline—but slightly less than the combined influence

of the social capital motives. The social capital motive that dominates the explanation for buying a haircut was the self-respect motive equal to 29% and the sharing motive equal to 21%. Two motives dominate the explanation for recycling: the self-respect motive equal to 34% and the sharing motive is also equal to 34%. The own consumption motive accounted for only 17%. Three of the four social capital motives dominated the explanation for voting: the sharing motive equal to 44%, the self-respect-esteem motive equal to 23%, and the belonging motive equal to 18%.

Based on the evidence presented above and in another work (Robison et. al., 2016a) we find that decision makers value relational goods precisely because they satisfy important socio-emotional needs relational goods are expected to satisfy.

Table 4. The average motive scores for 990 subjects when asked about the relative importance of motives when buying gasoline, buying a haircut, recycling, and voting.

Motive	Mean	Standard Error	t-statistic	p-value
<i>Gas Purchase</i>				
Own consumption	87%	2.43	35.8	0.000
Good will	1%	0.53	1.89	0.029
Self-respect	4%	1.05	3.81	0.000
Belonging	2%	0.95	2.11	0.017
Sharing	6%	1.48	4.05	0.000
<i>Haircut</i>				
Own consumption	47%	4.21	11.16	0.000
Good will	1%	0.63	1.59	0.056
Self-respect	29%	3.48	8.33	0.000
Belonging	2%	0.84	2.41	0.008
Sharing	21%	3.16	6.65	0.000
<i>Recycling</i>				
Own consumption	17%	3.06	5.56	0.000
Good will	5%	1.58	3.16	0.000
Self-respect	34%	3.06	11.11	0.000
Belonging	11%	1.79	6.15	0.000
Sharing	34%	3.06	11.11	0.000

	<i>Voting</i>			
Own consumption	13%	2.32	5.6	0.000
Good will	2%	1.05	1.9	0.029
Self-respect	23%	2.74	8.39	0.000
Belonging	18%	2.53	7.11	0.000
Sharing	44%	3.48	12.64	0.000

Terms and level of trade and selection of trading partners and relational goods

At the beginning of this paper, we claimed that important exchange anomalies could be resolved by including relational goods. To illustrate how including relational goods in exchanges can resolve important economic anomalies consider the following example. Suppose a seller has the option of exchanging his farmland with a stranger for a commodity (the market price) or exchanging his farmland with a friend or family member for a combination of commodities and relational goods. If the seller prefer the combination of relational goods and commodities offered by friends and family members to the commodities offered by a strangers even though the commodities offered by the stranger exceed those offered by friends and family members—we might consider that an economic exchange anomaly has occurred—the seller accepted a lower commodity price from a friend or family member when a higher commodity price was available from a stranger. But this is only an anomaly if the relational goods included in the exchange are ignored.

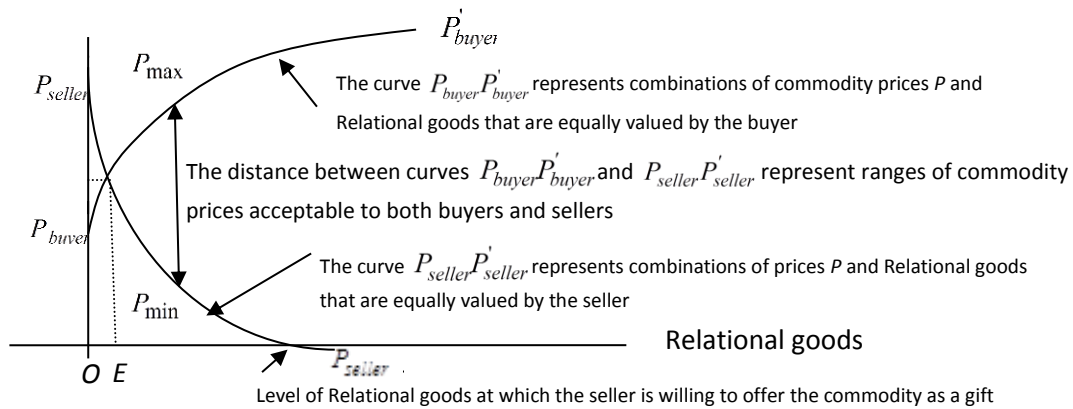
To explain further how including relational goods in exchanges can resolve anomalies we consider the concepts of an isoutility line. Suppose that a decision maker is offered alternative combinations of two goods, a commodity and a relational good. Furthermore, allow that the amounts of the commodity and relational good can be exchanged at some rate that leaves the well-being of the decision maker unaffected. The combinations of relational goods and commodities that leave the decision maker’s well-being unaltered are referred to isoutility

combinations and are represented in Figure 1 as $P_{buyer}P'_{buyer}$. Curve $P_{seller}P'_{seller}$ represents the seller's

Figure 1. Combinations of commodity prices and relational goods that leave buyers' and sellers' well-being unchanged.

Figure 1 shows combinations of relational goods and commodity prices.

Commodity Price P



The implication of the graph in Figure 1 is that as more of a relational good is received, the seller (buyer) would be willing to accept (offer) a lower (higher) commodity price without suffering a loss in well-being. Furthermore, as relational goods are included in the transaction, the range of commodity prices acceptable to both buyers and sellers increases which also increases the likelihood that persons rich in social capital will exchange. For example, in Figure 1 persons without social capital would not trade since with no relational goods exchanged, the minimum sell price is above the maximum bid price.

In one of the first studies designed to test the influence of relationships on terms and level of exchange, Robison and Schmid (1989) asked faculty and graduate students what would be their minimum sell price of a used cars to persons to whom they offered various levels of social

capital. Since the Robison and Schmid article was published, the essence of the study has been repeated multiple times with similar results. A recent survey by Winder found the results reported in Table 5. The mode of the distributions of responses by relationship are bolded.

Table 5. Average minimum sell price for a used car with a market value of \$3,000 reported by 600 survey respondents.

	Nasty neighbor	Stranger	Friend	Family
>\$3,500	65			
\$3,500	263	39	2	
\$3,250	21	33	5	1
\$3,000	236	476	122	29
\$2,750	11	30	135	24
\$2,500	4	22	298	199
<\$2,500			38	348

Notice that in the absence of social capital (exchanges with a stranger), the distribution of minimum sell prices centers around the commodity exchange price of \$3,000. However, when the exchange is conducted with a social capital rich partner such as a friend or family member, the minimum sell price is significantly below the market price with a mode of \$2,500 for a friend and a mode price below \$2,500 for a family member.

Summary and conclusions

Consider some reflections on what has been presented in this paper. With regard to predictions produced by the traditional economic model of the 95% selfish “econ” maximizing profits without regard to the consequences of his/her choices on others—behavioral economists have accumulated a large numbers of examples that are inconsistent with these predictions, anomalies. Our land value results published earlier are in that spirit—that relationships alter the terms and level of trade and the selection of trading partners in the farmland market..

What we have offered in this paper is, perhaps, a novel explanations for the observed anomalies including anomalies observed in the farmland market: a missing variable. The

missing variable is a relational good that is valued because it satisfies important socio-economic needs. Relational goods are produced by social capital and exchanged between persons in rich social capital networks. As a result, when relational goods are offered a buyer (seller) in addition to a commodity price—the commodity price accepted in the exchange will be influenced by both the amount of relational good included in the exchange as well as the value of the commodity.

Summarizing, when only commodities are exchanged between strangers, the results should be consistent with the standard economic model predictions. But when relational goods are exchanged in either of two settings, relationship versus good focused, the terms and level of trade measured in commodity will be inconsistent with predictions of the standard economic model. But not inconsistent with an expanded exchange model that includes relational goods and recognizes alternative motives for exchange than the traditional own consumption model.

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